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Dräger Medical
Information Technologies

Dräger

Saturn Administrator's Guide

Part Number: 4115609-003
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Date: 21 June 2002
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List Manager
Environment Manager
Case Manager

Software Version 4

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1 Introducing the Administrator's Guide

This section introduces you to the Saturn Administrator's Guide.

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What Is The Saturn Administrator's Guide?

The Saturn Administrator's Guide contains instructions for the functions performed by the Saturn system administrator, hereafter referred to as the Saturn Administrator. The Saturn Administrator is the person responsible for maintaining security access rights, Saturn lists (List Manager), Saturn environments (Environment Manager), and case management (Case Manager). These responsibilities are summarized below and in detail in the List Manager, Environment Manager, and Case Manager sections of this manual.

Saturn Information System

The Saturn Information System is comprised of several applications that allow specific functions. The Recorder application, used by anesthesia clinicians, is configured and overseen by the Saturn Administrator. Saturn Administrators also use three Saturn applications to perform their system oversight tasks. Those applications are List Manager, Environment Manager, and Case Manager. Lastly, Report Manager lets administrators and users generate standard reports for various studies. Refer to the descriptions below for details.

Saturn Administrator Guide

The Saturn Administrator's Guide contains instructions for managing the various tasks in the network environment. The first two chapters in this guide describe data management responsibilities within the network environment. The remaining chapters consist of the List Manager, Environment Manager and Case Manager applications.

List Manager

List Manager lets you create and tailor the lists that the anesthesia clinician uses in Recorder and Environment Manager, such as lists of drugs, events, procedures, and surgeons. List Manager also lets you create subgroups that list items into clearly defined categories (i.e., subgroups for the Drugs list could be Narcotics, Reversal, Induction and Cardiac).

Environment Manager

Environment Manager lets you configure Recorder options and save them as an "environment" using a unique name (i.e., your name). When an environment is selected for use while Recorder is running, Recorder reads and uses that environment's configuration options for that session. The configuration options consist of templates (groupings of drug, event, fluid, vitals, charge, and lab lists), default items entered into a case, and the case settings.

Case Manager

Case Manager lets you delete and restore patient case files that are created in the Saturn Recorder application.

Saturn User's Guides

There are two Saturn User's Guides which are separate from the Saturn Administrator's Guide.

Recorder

Recorder is a software application for the anesthesia clinician to use in documenting the perioperative anesthesia process. The application provides easy data entry and access, as well as a means to record and store data collected automatically throughout the process.

Report Manager

Report Manager lets you generate standard reports for time studies, drug studies, and quantitative studies. Each study generates reports for specific periods of time. The reports can be printed or saved to a report template file.

A Windows NT and Windows 2000 Application

The Saturn applications operate on personal computers under the Microsoft® Windows NT® and Windows 2000® operating systems. Saturn Administrators who have experience using Windows NT, Windows 95®, or Windows 2000 will find Saturn applications to work like any other Windows-based application. Administrators and users will also find many familiar Windows features in the Saturn interface.

Note: You may experience small fonts displayed in some Microsoft® applications if you open them after you open Recorder on your nonclinical workstation. If this occurs, shut down and restart your nonclinical workstation. Ensure that the font-problem Microsoft applications that you want to use at the same time as Recorder are open before you open Recorder.

Saturn Security

The Saturn Information System offers a level of security that ensures only authorized personnel are able to access the various application programs. Only users with a recognized ID and password combination can log on to the Saturn Information System. List Manager and Environment Manager are accessible from the Utilities menu of Recorder. However, they are also stand-alone applications (i.e., they can be accessed via the desktop or Windows Start menu on a nonclinical workstation), as is Case Manager, which is installed on nonclinical workstations.

The Saturn Administrator assigns a user ID, password, and security level in the Staff Entry dialog box of each person authorized to use specific applications, or sections of an application (i.e., Holding, Intra-Op, Post-Op, etc. in Recorder). Refer to Section 4 in the List Manager section of this guide for details.

Access to Saturn Functions

Access rights determine which Saturn functions an individual may use.

Rights	Saturn Functions
Administrator	Access all Saturn functions
Edit All Cases	Update a record after data recorded and case closed
Case Manager	Access the Case Manager application
Environment Manager	Access the Environment Manager application
List Management	Access the List Manager application
Admission View	Access the Recorder Admission section
Holding View	Access the Recorder Holding section
Pre-Op View	Access the Recorder Pre-Op section
Intra-Op View	Access the Recorder Intra-Op section
Post-Op View	Access the Recorder Post-Op section
Browse View	Access the Recorder Browse section
Print Pre-Op Reports	Print the Pre-Op History, Patient Systems, Exam, Plan, and Summary reports
Print Holding Reports	Print the Holding Record and Summary reports
Print Intra-Op Reports	Print the Anesthesia Record and Summary reports
Print Post-Op Reports	Print Post-Op Record, Patient Systems, Assessment, Score, Checks, Discharge and Summary reports
Outcomes Audit	Access the Outcomes section
Record Automatic Data	Record automatically-generated data
Report Manager	Access the Report Manager application
Edit Automatic Data	Edit automatically recorded data
User Logon	Displays the user's name in the Logon dialog box
Workstation Configuration	Access to Workstation Configuration
Purge Cases	Able to permanently erase cases via Case Manager

Where Do I Use Saturn?

You can use Saturn on any PC in your hospital that is designated as a Saturn workstation. You may, for example, find Saturn workstations in the operating room, in the recovery room, at your desk, or at patient interviewing stations.

The Network Environment

Because Saturn operates in a network environment with a centralized database, you can access your case data from any workstation that is part of the network. Figure 1-1 illustrates a typical network. Note that some of the workstations are connected to anesthesia machines or monitors. Note also that all of the workstations are connected to the central Draeger Medical, Inc. database through the network. The database is ODBC-compliant and supports SQL queries.

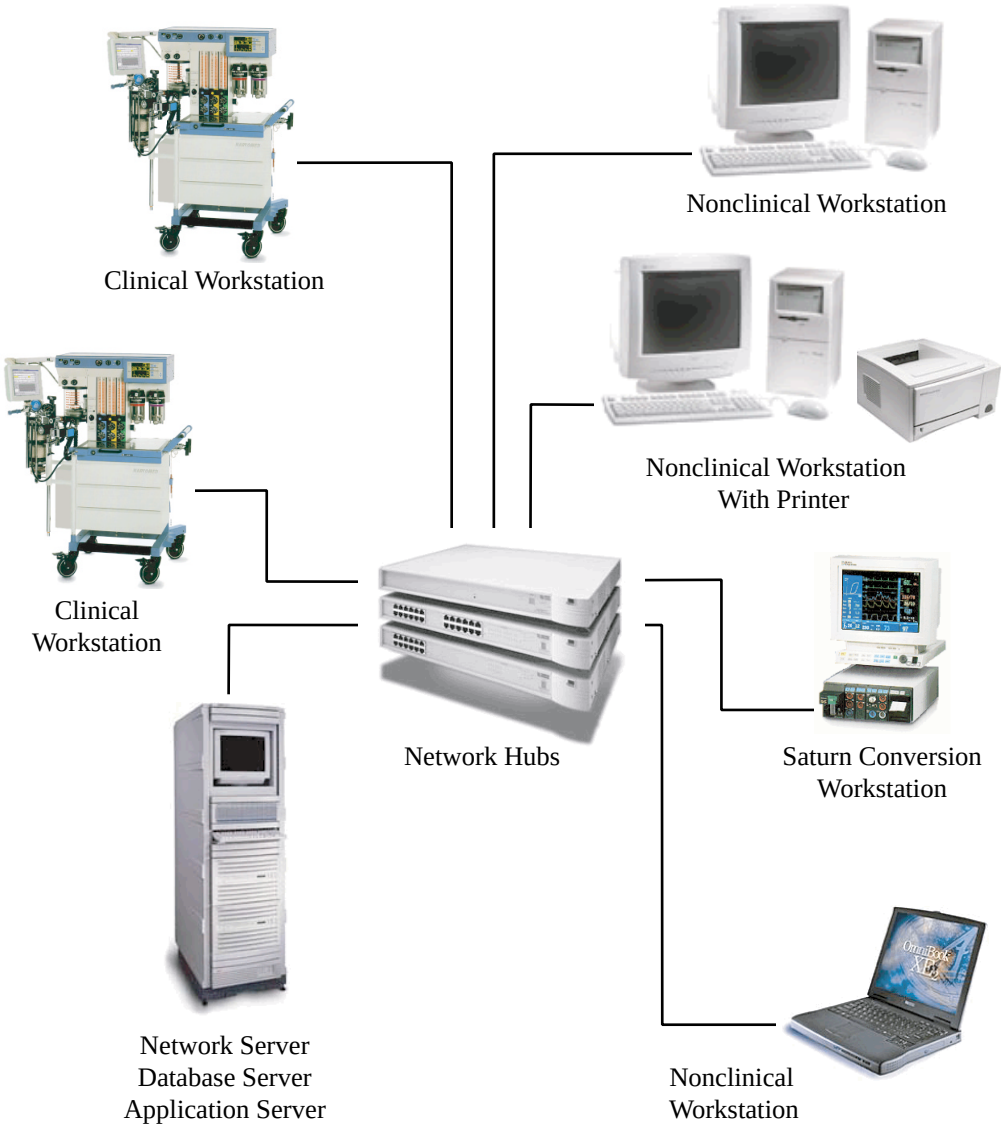

Figure 1-1. The Saturn Information System Network

Workstations

A Recorder workstation is a PC/AT-compatible computer that meets certain minimum hardware requirements. Any of the following input devices may be available at a workstation running the Recorder application: touch screen, mouse, or keyboard.

The Saturn Clinical Workstation

The Saturn Clinical Workstation is a special workstation intended for use during the preoperative, surgical, and postoperative phases. The Saturn Clinical Workstation has the following features:

- It has a touch screen with large controls for special OR displays. This enables you to use your fingers, as well as a stylus or some other pointing device, to interact with the OR displays.
- It runs the Recorder application at all times. This provides security and convenience, ensuring that Recorder is available to you when you need it.
- Environment Manager can be installed to run from the Utilities menu.
- Case Manager can be installed to run from the Utilities menu.
- List Manager can be installed to run from the Utilities menu.
- It contains an isolation transformer, which meets the leakage current specifications of the UL and CSA Standards for medical equipment.
- It has an uninterruptible power supply (UPS), which manages system software during interruptions of AC-mains current. The uninterruptible power supply ensures continuous operation of the software and prevents the need to reboot the system in the event of a short AC power failure.
- It utilizes opto-isolation ports, which prevent ground loops and leakage current from external devices into the workstation.
- It contains a control status card, which monitors and controls speaker functions (if speakers are used); measures and reports on the temperature in the processor; and provides an error recovery mechanism in the event of a system malfunction.

The Nonclinical Workstation

The nonclinical workstation is a standard PC that is never connected to a medical device. Therefore, it is usually not configured with a touch screen. Rather, the nonclinical workstation is intended for use by administrators and supervisory and clerical personnel to perform the following:

- Annotations and reviews of patient records (created in Recorder) using the Case Manager program
- Setting up and configuring working environments (used in Recorder) using the Environment Manager and List Manager programs
- Generating reports using the Report Manager program

Patient records can also be created using Recorder on the nonclinical workstation as long as there is no requirement to automatically collect data from a medical device. Recorder runs on the nonclinical workstation as a standalone application.

How Do I Use This Manual?

This manual contains instructions for using the List Manager, Environment Manager, and Case Manager applications.

What's New in the Administrator's Guide

With each release of Saturn software, a list of new features and changes to the existing software is provided in the Introduction chapters of the List Manager, Environment Manager and Case Manager sections of this manual. Refer to those chapters for details.

Manual Organization

The manual is organized sequentially to mirror the steps you might take in a typical situation. However, because no user or situation is truly typical, you can skip around in both the applications and the manual.

Conventions

This manual uses standard typographical and keyboard conventions to help you interpret the information presented. These conventions are described in the following table.

Table 1-1. Typographical and Keyboard Conventions

Convention	Used For	Example
Helvetica Type	Window controls, such as entry fields, menu options, and toolbar buttons.	In the Last field, enter the patient's last name.
Small Capitals	Keyboard keys.	To display a menu, press the ALT key, then the underlined letter in the menu name.
Italics	A generic data description, for which you or the system substitutes a specific value.	Enter the time in *hh:mm* format.
Monospace Type	Messages displayed by the system.	If you receive the message **`Case in Use`**, the case is already open.
Comma (,) between key names	Keyboard keys that you press one after the other. (Press the first key and release it. Then press the second key and release it.)	To display the File menu, press ALT,F.
Plus sign (+) between key names	Keyboard keys that you press simultaneously. (Press the first key and, while holding it, press the second key. Then release both keys.)	Press the TAB key (SHIFT+TAB to move backward) until the button is highlighted.

2

Administrator’s Responsibilities

This section describes the Saturn Administrator’s daily responsibilities.

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Draeger Medical, Inc. Disclaimer

The hospital-designated or hospital-employed Saturn Database Administrator (hereafter referred to as the Saturn DBA) is responsible for the Saturn Information System database and its contents (this includes taking all steps necessary to ensure the integrity of the data). Draeger Medical, Inc. provides the following information only as an aid to the Saturn Database Administrator in fulfilling his or her responsibility as described above. Draeger Medical, Inc. in no way guarantees that performing the following steps will ensure safe and secure data. The Saturn DBA must apply procedures that comply with hospital practices for the preservation and integrity of hospital data to the Saturn Information System database. These procedures are the sole responsibility of the hospital and its information system department.

Responsibilities Overview

The Saturn Database Administrator (DBA) is responsible for maintaining various components of the Saturn Information System, including but not limited to, the recommendations listed in the following sections:

Server

- Monitoring disk space on a regular basis
- Managing disk space - deleting and moving files when necessary
- Creating a Database Recovery Procedure - Refer to Sybase document "*What Backup, Recovery and Disaster Recovery mean to your Databases?*" at http:// www.sybase.com/ detail/1,3693,47877,00.html
- Ensuring that backups of the Saturn database are occurring on a regular basis
- Ensuring that validation of the database is occurring on a regular basis
- Ensuring that backups of the Saturn database are being copied to tape storage
- Ensuring that tape backups are being stored properly
- Periodically verifying the ability to restore a Saturn DB from tape
- Maintaining sufficient capacity to run the testing of your Database Recovery Procedure
- Testing your Database Recovery Procedure periodically
- Replacing failed hardware
- Anti-virus protection

Important: Anti-virus protection is the sole responsibility of the hospital's Information Systems (IS) department. Implementing anti-virus software may affect Saturn or other software and associated data files already located on the Saturn workstation.

Nonclinical Workstations

The following tasks should be performed for proper maintenance of all Saturn nonclinical (commercial grade) workstations:

- Monitoring disk space on a regular basis
- Replacing failed hardware
- Rebuilding and reconfiguring workstations as a result of failed hardware
- Anti-virus protection

Important: Any service completed on a nonclinical (or commercial grade) workstation by your health care organization, Draeger Medical, Inc., or any other third party vendor, may affect the software and other information stored on that workstation.

All Saturn Workstations

The following tasks should be performed for proper maintenance of all Saturn nonclinical (commercial grade) workstations:

- Consulting with Saturn Technical Support prior to making any changes to the network or hardware configuration of any component of the Saturn System
- Anti-virus protection

Important: Any service completed on a clinical (or medical grade) workstation by your health care organization, Draeger Medical, Inc., or any other third party vendor, may affect the software and other information stored on that workstation.

Printers

The following tasks should be performed for proper maintenance of all Saturn printers:

- Verify proper drivers are available and are loaded for each printer
- Appropriately maintain printers

The Saturn Database Administrator's Daily Responsibilities

The Saturn DBA is responsible for the Saturn Information System database and its contents (this includes taking all steps necessary to ensure the integrity of the data).

Note: DMI strongly recommends the following steps be taken on a daily basis to aid in optimal system performance and database integrity.

1. Utilize Sybase Central to execute the DBBackup utility. This utility will create a database and/or a transaction log backup to a user-specified directory on the hard disk drive. This utility **must** be run with the 'Delete and Restart the Transaction Log' option enabled (the **-x** switch) to ensure continued optimal performance. Additionally, the Administrator may utilize other options that best serve the hospital's backup needs. Refer to the backup and recovery information provided in the online help for further information.

   Note: In the event of a system failure, data recovery procedures may only restore information up to the latest backup.

2. Archive the database backup file(s) in accordance with normal hospital procedures. This should include validation of the backup file(s) and their restoration.

   Note: The password necessary to perform the database administrator-level functions outlined above will be provided to the Saturn DBA as part of the on-site acceptance sign-off procedure. As with any confidential information, knowledge of this password should be limited to required personnel only.

Additional steps should be taken to ensure the recoverability of the Windows NT Operating System. The Saturn DBA should follow normal procedures for ensuring the integrity and recoverability of the Operating System.

Note: The following files should be excluded from an operating system backup because they are in use when the database server is running. Their inclusion may cause the operating system backup to fail or produce errors:

- periopdm.db
- periopdm.log

Sample Database Recovery Utilizing Sybase Utilities

DMI supplies the following sample solely as a means of providing a "Saturn" context to the information supplied in the Sybase documentation. The sample serves as a guideline in developing a "database backup and data recovery" strategy as part of an overall disaster recovery strategy.

Note: "Disaster recovery" differs from database recovery scenarios because the operating system and related software must be recovered before any database recovery can begin.

Since the following sample is furnished as a guideline to aid the user in developing a backup and data recovery strategy, DMI does not guarantee its accuracy. Determination and implementation of a backup and data recovery strategy consummate with the collected data's sensitivity is at the hospital's discretion. Since the extent of, and time to, recovery is dictated by the frequency of backups, Draeger Medical, Inc. recommends backup frequencies similar to those presented in the following sample.

Because command line switches and options exist in the Sybase documentation in addition to the ones referenced below, DMI recommends a review of the Sybase Backup and Data Recovery section prior to implementation of any comprehensive backup and data recovery procedure. Likewise, full knowledge in advance of the steps to be taken should data recovery become necessary, is highly recommended. Regular disaster recovery tests should be scheduled to validate the recoverability of data and the instated procedures. Refer to the Sybase online documentation for a complete explanation of proper database backup and restore procedures. This information is also available online at the Sybase Support web site at:

http://sybooks.sybase.com/database.html

Select 'Adaptive Server Anywhere' followed by the 'SQL Anywhere Studio 7.0 (Generic)' link.

Overview

The Saturn database consists of a database root file and a log file. The main database file, or root file, contains database tables, system tables and indexes. The transaction log file, or log file, records all database modifications made to the various Saturn applications since the last database backup. During normal operation, the database engine optimizes performance by "holding" data in memory as it is being worked on. Periodically, data from committed transactions are written to disk. This operation is called a checkpoint, as it ensures that all data affected by those transactions have been written to persistent storage. This point in time reflects a known database state. During data recovery, the database engine uses the transaction log file(s) to apply any changes made to the database file between the most recent checkpoint and the system failure.

When a full online database backup process begins execution, as noted in step 1 in the following sample, the database engine performs a checkpoint of all cached data pages kept in memory to the database file on disk. The database engine continues recording activity in the transaction log file while the database is being backed up. The transaction log file is backed up after the backup utility finishes backing up the database. Step 4 outlines the use of an incremental backup that makes a copy of only the transaction log file since the most recent full or incremental backup. Utilizing incremental backups in conjunction with periodic

full backups as outlined in the following steps provides the best balance between data recoverability and resource utilization.

- Create a Full Backup of the Database File
- Copy the Database File Backup to Tape
- Validate the Backup Database File
- Create a Transaction Log File Backup Hourly
- Copy the Transaction Log Backup File to Tape After Each Iteration
- Rotate Tapes Per Established Procedure
- Repeat the Preceding Steps on a Daily Basis

The database administrator can either use Sybase's database utilities directly or use DMI's database utilities that are provided for automation of the backup process. The DMI utilities will perform full database backups of the database and log files, incremental backups of the log file, and validations of either the live production database or a backup file. Both options are described below.

1. Create a Full Backup of the Database File

Create a backup directory structure on a selected system drive. Ideally, the backup structure should be located on a different drive from the database file. Utilizing Sybase's Dbbackup command, create a full database backup. The syntax for this command is as follows:

dbbackup.exe -c "uid=*UserId*;pwd=*Password*;eng=EngineName;dbn=*Dbfilename* " -x -q -y *TargetDirectory*

Where:

-c	Database connection parameters *UserId* is the Administrator's database user name *Password* is the Administrator's database password *EngineName* is the Server Service database engine name *Dbfilename* is the database file
-x	Delete and Restart the Transaction Log
-q	Quiet mode -- do not print messages
-y	Replace files without confirmation

TargetDirectory is the path location of the backup file

Dbbackup

Dbbackup is the only utility provided by Sybase to perform a “live” backup of a running database. As such, it is the only utility that should be used to backup the database and its transaction log during database operation. See Sybase documentation for a full explanation of dbbackup switches. Database utilities have been provided to you by DMI to ease the implementation of database backups and validations. The directory structure listed below will be created automatically if you utilize the DMI batch file utility. The DMI utilities are reviewed in the next section.

The most typical directory structure would be a separate directory for backups, with a subdirectory for each day of the week. Creating a subfolder beneath the day-of-the-week folder for incremental transaction log files further eases the backup process. Full backups can be created in the day-of-the-week folders; while the incremental backups since the last full backup can be placed in the day-of-the-week subfolder. This arrangement makes it easy to routinely move backups off to tape.

```
D:\NAD\DB\BU\ ----
                |--Sunday\
                        |-- Logs\
                |--Monday\
                        |-- Logs\
                |--Tuesday\
                        |-- Logs\
                |--Wednesday\
                        |-- Logs\
                |--Thursday\
                        |-- Logs\
                |--Friday\
                        |-- Logs\
                |--Saturday\
                        |-- Logs\
                |--Validate\
```

Assuming such a structure, the "Admin"istrator with a "Pass"word database login would compose the above command as follows to generate a full database backup (the database file and it's transaction log file) for Monday:

```
Dbbackup.exe -c "uid=Admin;pwd=Pass;eng=Saturn;dbn=periopdm" –x –q –y
d:\nad\db\bu\monday
```

The result of executing the above command would be the creation of a backup copy of the database file and the transaction log file in the Monday subdirectory.

2. Copy the Database File Backup to Tape

As with any business critical data, scheduled transfer of backup files to archival media such as tape should be part of the backup and recovery procedure. Tape backup should be performed as closely to backup file creation time as possible to minimize the likelihood of data loss. Therefore transfer to tape should occur immediately following the completion of step 1.

3. Validate the Backup Database File

There are two different ways to validate the backup database. Either use Sybase's validation utility directly, or use the NadValidateDb utility provided by DMI and described in the next section. Validate the backup database file to ensure recoverability in the event of system failure.

Important: Since a backup is only useful if it can be restored successfully, it is recommended that the validation step outlined below be performed on the database backup **after** it has been copied back from tape. This ensures that the transfer process outlined in Step 2 was successful.

Note: Per Sybase's documentation, the dbvalid utility must be run **after** storage to tape, since the dbvalid utility alters transaction log offsets. Running the dbvalid utility on the database backup file prior to tape storage will render the backup useless for recovery purposes.

The backup files created in step 1 above provide snapshots of the database and any outstanding transactions. To ensure that the backup file is valid and can be counted on should data recovery be necessary, validation of the backup should be performed. The syntax for this command is as follows:

Dbvalid.exe -c "uid=*UserId*;pwd=*Password*;eng=EngineName;dbn=*Dbfilename*"

Where:

-c Database connection parameters

UserId is the Administrator's database user name

Password is the Administrator's database password

EngineName is the Server Service database engine name

Dbfilename is the database file name

Then, continuing with our example, validation of the full database backup created on Monday and copied back from tape into the Validate directory, and utilizing the Validate service would be performed with the following command:

Dbvalid.exe -c "uid=*Admin*;pwd=*Pass*;eng=Validate;dbn=*periopdm*"

The validation utility scans every record in every table and looks up each record in each index on the table. If the backup is corrupt, another backup needs to be created and this step repeated. Continued failure to validate the database backup may indicate corruption in the running database. If this occurs, consult the Sybase documentation for information on the steps necessary to recover.

4. Create a Transaction Log File Backup Hourly

Utilizing Sybase's dbbackup command, create a backup of the transaction log on an hourly basis. This creation frequency minimizes the likelihood of data loss. The format of the command is identical to the command in step 1 with the addition of the "-t" switch. A process must be put in place to prevent the incremental log backups from overwriting the previous one for that day in the 'logs' subdirectory. If they would be overwritten then the log files cannot be utilized during a database restoration and a greater amount of data loss would result. The log file renaming can be automatically accomplished through the use of DMI's database backup utility, explained in the next section.

dbbackup.exe -c "uid=*UserId*;pwd=*Password*;eng=EngineName;dbn=*Dbfilename* " -t –x -q -y *TargetDirectory*

Where:

-t Only back up the transaction log file

Note: See Sybase documentation for a full explanation of dbbackup switches.

5. Copy the Transaction Log Backup File to Tape After Each Iteration

As in step 2 above, transfer of the backup translation log file to tape should occur immediately after each iteration of step 4. After transferring the files to archival media and validating their state, the files should be removed from the backup directory to conserve disk resources.

Note: Transaction logs can be validated using the "dbtran" utility provided by Sybase. See Sybase documentation for a full explanation of "dbtran" and its switches.

6. Rotate Tapes Per Established Procedure

The tapes should be rotated per an established procedure and stored in a safe remote location for use in the event that data restoration is necessary. Previous full backup files should **never** be overwritten until the latest full database backup has been validated.

7. Repeat the Preceding Steps on a Daily Basis

Repeat the preceding steps daily to ensure data integrity and recoverability in the event of system failure.

Windows NT Task Scheduler

The Windows NT Task Scheduler service can be used in conjunction with the steps outlined above as a means of automating the collection portion of the hospital's backup strategy. The NT Task Scheduler service must be started in order to schedule jobs, or for previously scheduled jobs to execute.

As a means of illustration, the full backup command covered above could be scheduled to run every Monday at 12 AM as follows:

AT 00:00 /EVERY:M dbbackup -c "uid=*Admin*;pwd=*Pass*;eng=Saturn;dbn=*periopdm*" –x -q -y *d:/nad/db/bu/monday*

Refer to the Windows NT documentation for a complete explanation of how to schedule jobs using the Task Scheduler service.

Database Utilities Provided by DMI

DMI provides five database utility files that automate some of the maintenance routines and help to secure the database by concealing the administrator username and password within the executable files. All five files are copied to the D:\nad\db\bu subdirectory during Saturn installation or upgrade. The NadBackupDb is also copied to the D:\nad\db directory. The utility files and their use follows:

1. NadDbBatch.exe

Creates a batch file (SrvrBackup.bat) to schedule jobs for a full backup of the database and an incremental backup of the transaction log using the Windows NT Task Scheduler service. There is a default 'SrvrBackup.bat' file installed in the 'bu' directory which will perform a full backup every night at midnight and an incremental log backup every hour starting at 2AM. If those times are not sufficient, or are excessive, then the naddbbatch executable file can be used to create a custom SrvrBackup.bat file for the site.

The syntax for the command is as follows:

Naddbbatch.exe *%TD% Time Interval*

Where:

%TD%-- target drive letter where the database is located (e.g. D)

Time Interval -- time interval, in hours, between incremental backup of the transaction log for each day of the week (e.g. 2).

For example, to create a SrvrBackup.bat file that contains the necessary entries to schedule a full database backup every night and incremental (i.e. transaction log file) backups every 5 hours, execute the following command from a DOS command window while in the \nad\db\bu directory:

Naddbbatch.exe D 5

This command will result in the creation of a SrvrBackup.bat file that, once executed, will register events with the NT scheduler to perform a full database backup nightly at 12am and incremental backups every five hours beginning at 2am (NOTE: incremental times begin from 2AM and repeat at the scheduled interval; thus jobs will be scheduled 2AM, 7AM, 12PM, etc. for the given example).

You can modify the SrvrBackup.bat file to meet your facilities needs, for example, having one backup directory instead of one for each day of the week. Keep in mind that doing so would require diligence in nightly copies to tape because the files will be overwritten each day during the scheduled intervals for backups.

2. SrvrBackup.bat

The SrvrBackup.bat file, when executed, will create the NT AT scheduler jobs that will perform the backups, both full and incremental. To work properly, the nadbackupdb.exe file must be in the D:\nad\db production database directory and the NT scheduler service must be started. The scheduled AT job will call the DMI utility 'nadbackupdb', which calls Sybase's dbbackup utility, passing in all the parameters required to perform a backup.

3. NadBackupDb.exe

The new executable (nadbackupdb) is provided to simplify Sybase's DBBackup command by making use of Sybase's Database Tool Interface. Either a full database and log file backup can be performed or an incremental log file backup can be performed. The NT AT scheduler jobs that are created by the SrvrBackup.bat file will call the executable file 'nadbackupdb' with the correct parameters for either a full or an incremental backup.

Note: The DMI database backup utility will only work with the database server named 'Saturn', as determined by the server service PCAPPS_Server –n parameter, and the database file name is Periopdm.

For example, to create a full database backup (the database file and transaction log), the following syntax should be used:

Nadbackupdb.exe *%TD% subdirectory Full backup flag*

Where:

%TD% -- target drive letter (e.g. D)

subdirectory -- name of target subdirectory (assumes that the subdirectory is located under %TD% :\nad\db\bu)

Full backup flag -- flag to indicate if a full backup (TRUE) or incremental backup (FALSE) is to be performed

NadBackupDb.exe calls Sybase's database backup utility with the following parameters and switches:

-x -- Delete and restart a new transaction log

-q -- Quiet mode -- do not print messages

-y -- Replace files without confirmation

-c -- "uid=...; eng=Saturn;dbn=periopdm

Therefore, the result of executing the following command:

Nadbackupdb.exe D Saturday TRUE

would be creation of a backup copy of the database (D:\nad\db\periopdm.db) and the transaction log file (D:\nad\db\periopdm.log) in the Saturday subdirectory (D:\nad\db\bu\Saturday).

To create an incremental backup of the transaction log only, the following command could be used:

Nadbackupdb.exe D Saturday FALSE 2

Where:

D -- target drive letter

Saturday -- name of target subdirectory (assumes that the subdirectory is located under D:\nad\db\bu)

FALSE -- create a backup of the transaction log only

2 -- time, in military hours, of the incremental backup

The result of executing the above command would be creation of a backup copy of the transaction log file in the Saturday subdirectory (%TD%:\nad\db\bu\Saturday\logs). The current transaction log located in the production directory is deleted and a new transaction log is started.

4. NadValidateDb.exe

The database file validation utility is called nadvalidatedb.exe. This executable can be utilized to verify the current production database, or a backed up copy of the database in the 'validate' directory that was previously archived to tape. The database file name must be Periopdm.

For example, to validate the backup database file, start the Validate service and issue the following command:

Nadvalidatedb.exe *%TD% VALIDATE*

Where:

%TD% -- target drive letter (e.g. D)

VALIDATE -- name of target subdirectory (assumes that the subdirectory is located under %TD% :\nad\db\bu)

The result of executing the following command would be validation of a backup copy of the database (periopdm.db) in directory D:\nad\db\bu\validate:

Nadvalidatedb.exe D VALIDATE

Also, passing an additional parameter called FULL, as indicated below can perform a full database validation:

Important: This option may significantly extend the time required to validate the database.

Nadvalidatedb.exe *%TD%* VALIDATE FULL

Where:

%TD%– target drive letter (e.g. D)

VALIDATE -- name of target subdirectory (assumes that the subdirectory is located under *%TD%* :\nad\db\bu)

FULL – Utilizes the Sybase dbvalid –f switch which, in addition to the default table validation, also verifies the Long Binary, Long Varchar, and Text data type columns, as well as each index on every table.

To validate the current database file, the following command could be utilized:

Nadvalidatedb.exe *%TD%* NULL

Where:

%TD% -- target drive letter (e.g. D)

NULL -- validate database (periopdm.db) in directory '\nad\db\' under *%TD%*

The result of executing the above command would be validation of the database (periopdm.db) in directory %TD%:\nad\db.

Also, passing an additional parameter called FULL, as indicated below, can perform a full database validation:

Important: This option may significantly extend the time required to validate the database.

Nadvalidatedb.exe *%TD%* NULL FULL

Where:

%TD% -- target drive letter (e.g. D)

NULL -- validate database (periopdm.db) in directory '\nad\db\'

under *%TD%*

FULL -- Utilizes the Sybase dbvalid –f switch which, in addition to the default table validation, also verifies the Long Binary, Long Varchar, and Text data type columns, as well as each index on every table.

5. TapeBuValid.bat

A new Sybase database service called Validate, that is setup during installation, can also be used to validate a database restored from tape. It is incorporated into the TapeBUvalid.bat file. The Validate service assumes that the restored database is located in the D:\nad\db\bu\validate directory. Perform the following steps to utilize the TapeBUValid.bat utility:

1. Verify the files TapeBUValid.bat and nadvalidatedb.exe are located in the D:\nad\db\bu directory.
2. Verify the database and log file, periopdm.db and periopdm.log respectively, have been restored from tape into the D:\nad\db\bu\validate directory.
3. Open a DOS window and switch to the D:\nad\db\bu directory.
4. At the command prompt enter the following:

   TapeBUvalid.bat D validate

Where:

'D' is the target drive letter

'validate' is the name of the target subdirectory, under %TD%:\nad\db\bu.

5. Press Enter and the TapeBUvalid.bat will perform the following:
   - Start the Validate service
   - Execute a validation of the restored database in the validate subdirectory
   - Stop the Validate service

Restoring From a Media Failure

The following steps refer only to a media failure and assume that the media failure has been corrected. The amount of data recovered will only be up to the point of the last full or incremental backup. Refer to the Sybase online documentation for a complete explanation of how to restore from a media failure, as well as failures other than media.

1. Stop All Saturn System-Related Services

From the Windows NT Control Panel, launch the Services applet. Locate and stop the following services in the order given:

Windows NT Task Scheduler

NAD Replication Monitor

Adaptive Server Anywhere -- PCAPPS_Remote

Adaptive Server Anywhere -- SaturnPCApps_Server

2. Restore Backup and Transaction Log Files

Restore the most recent full backup and succeeding transaction log files.

Restore the latest full backup of the database file, periopdm.db, from tape to a working directory (e.g. d:\nad\db\rcv), not the current live directory. Restore all of the logs that have been backed up since the last full backup was created to a second working directory (e.g. d:\nad\db\rcv\logs), a subdirectory of the first working directory.

3. Apply the Log Files to the Full Backup

Open a DOS command window and run a restore/apply log file command to reapply the backed up transaction logs to the full database backup file. Transaction log files must be applied one at a time and in the proper sequence, starting with the oldest first and finishing with the most current. Applying any of the log files out of order will result in an error and will require that the restoration process begin again from the start (see troubleshooting note below). Under normal circumstances, the backed up transaction log file names can be used to verify the proper order of application. Transaction log files that are backed up with the DMI nadbackupdb utility have the following format:

##periopdm.log.

Where:

-- Number from 2 to 23 representing the time that the incremental backup occurred for a specific day of the week

A typical command sequence to restore a database from a full backup created on December 29th, 2001 from the DMI utilities with incremental database log backups every two hours might be as follows:

dbsrv7 –c 64M d:\nad\db\rcv\periopdm.db -a d:\nad\db\rcv\periopdm.log

dbsrv7 –c 64M d:\nad\db\rcv\periopdm.db -a d:\nad\db\rcv\logs\2periopdm.log

dbsrv7 –c 64M d:\nad\db\rcv\periopdm.db -a d:\nad\db\rcv\logs\4periopdm.log

dbsrv7 –c 64M d:\nad\db\rcv\periopdm.db -a d:\nad\db\rcv\logs\6periopdm.log

Where:

-c Cache switch to preconfigure an amount of memory to use

-a Apply log command line switch

periopdm.log is the backed-up transaction log at the time the full back up was created

##periopdm.log is the backed-up transaction log at the incremental times

4. Move the Reapplied Database

When you are done reapplying all of the log files, move the corrupted database file and log file(s) out of the production directory and into a temporary directory. Move the reapplied database file into the production directory.

Note: Only move the reapplied database file. A new log file will be created when the database restarts.

5. Restart the DB Server Service

From the Windows NT Control Panel, launch the Services applet. Locate and restart the Adaptive Server Anywhere -- PCApps_Server service.

6. Validate the Reapplied Database

Verify that the restored database is not corrupt by running dbvalid. Continuing with the backup sample above, the command would be as follows:

Dbvalid.exe -c "uid=Admin;pwd=Pass;eng=Saturn;dbn=periopdm"

Or –

Run the DMI NadValidateDb utility from the command line as:

D:\Nad\Db\Bu>NadValidateDb D NULL

7. Create a Post-Recovery Backup

Following restoration, you should perform a full backup of the database and its log file. This establishes a new baseline if future restorations are necessary.

8. Restart the Task Scheduler Service

From the Windows NT Control Panel, launch the Services applet. Locate and restart the Windows NT Task Scheduler service (Windows NT Task Scheduler). This will re-enable any scheduled database backups.

Troubleshooting Note

Under rare circumstances, a scheduled incremental backup may begin execution prior to the completion of a full backup. Be aware that the logical order of the files may be disrupted if the incremental backup finishes first. Since the log files need to be reapplied in log offset order, it is possible that an error similar to the following may be encountered during a restoration process under these conditions.

"Cannot open transaction log file '*filename.log*' since it has been used more recently than the database file."

To determine the offset that the database file is looking for when reapplying the first log file, follow the steps below.

1. Run the log reapply command in verbose mode (-z) and pipe the output (-o) to a text file. This command can be executed as follows:

   dbsrv7 d:\nad\db\rcv\periopdm.db -a d:\nad\db\rcv\logs\periopdm.log -z -o d:\nad\db\rcv\output.txt

2. Check the output.txt file to determine the date and time of the log file the database is trying to use. Locate this log file in the "logs" recovery directory. Remember, if any log file is applied out of sequence, recovery must be restarted utilizing a clean full backup of the database file.

Frequently Asked Questions (FAQ)

The following section addresses questions related to the following categories:

- Database backup and validation
- Security of information
- Hard drive management
- Saturn Technical Support
- Writing reports
- Miscellaneous

Database Backup & Validation

1. How do I determine the correct order to reapply log files to a full backup if the numerical order of the ##periopdm.log files is not correct?

Answer

Use the dbtran command to determine the offsets of a log file. Dbtran will return the beginning and ending log offsets for the file. These values can be used to determine the order of the log files, if necessary. Execute the following command from the directory location of the log file.

Dbtran.exe -y filename.log NUL

This is helpful in determining where a problem/hole exists in the log offsets.

Question

2. When is it safe to delete older incremental backup transaction logs?

Caution: NEVER delete a log file from the d:\nad\db directory!

Answer

Once a full database backup and its associated transaction log has been validated, incremental backup log files created **prior** to that full backup may safely be erased. Remember, incremental transaction log files capture the changed state of the database since the last full backup, so **never** delete backup incremental transaction log files after a full backup, until the next full backup has been safely stored away and validated.

Question

3. How do I run a validation on a database backup without impacting the operational database's performance?

Answer

Since the same physical server used during normal Saturn operation is also used to validate the database, it is best to schedule database backup validation when demands on the system are the least. There is a second instance of the database server service called 'Validate' already created to run the validation process.

Note: Care must be taken to ensure that database cache allotted to all database server processes does not exceed the available physical server memory. Reference the Sybase documentation for a full explanation of database server switches and their role in system performance before creating a second service for validation purposes.

Copy the database and transaction log files that are to be validated from the backup media (e.g. tape) to the *D:\nad\bu\validate* directory.

Begin validation by doing one of the following:

Either:

Launch Sybase Central and connect to the *Validate* database server service using the administrator's login and password. In the left pane, expand the *Validate* tree, right click on the *periopdm* icon, and select Validate. Results will be displayed in the validation window.

Or:

A new Sybase database service called Validate, that is set up during installation, can also be used to validate a database restored from tape. It is incorporated into the TapeBUvalid.bat file. The Validate service assumes that the restored database is located in the D:\nad\db\bu\validate directory. Perform the following steps to utilize the TapeBUValid.bat utility:

1. Verify the files TapeBUvalid.bat and nadvalidatedb.exe are located in the D:\nad\db\bu directory.
2. Verify the database and log file, periopdm.db and periopdm.log respectively, have been restored from tape into the D:\nad\db\bu\validate directory.
3. Open a DOS window and switch to the D:\nad\db\bu directory.
4. At the command prompt enter the following:

   TapeBUValid.bat D validate

   Where:

   'D' is the target drive letter

   'validate' is the name of the target subdirectory, under %TD%:\nad\db\bu.
5. Press Enter and the TapeBUvalid.bat will perform the following:
   - Start the Validate service.
   - Execute a validation of the restored database in the validate subdirectory.
   - Stop the Validate service.

Run the batch file through a DOS window or schedule it for execution using the NT Task Scheduler.

Question **4. What do I do if the database backup fails?**

Answer If the database backup fails then review any displayed error message you receive, and any error messages that are listed in the Event logs for that time frame. Typically the error is caused by inadequate disk space. You will need to add disk space, and/or modify your backup process so that you do not run into the same problem again. Someone must be assigned the responsibility for monitoring the disk space on the server. If the failure is not due to disk space problems, call Saturn Technical Support.

Question **5. After freeing up disk space, should I restart the full backup?**

Answer That depends on your needs and your policy. You could simply continue on with the scheduled NT AT jobs running the incremental backups and wait for the next scheduled full backup to run. Keep in mind that if you choose to do this and restoration is necessary, two days of incremental logs will need to be applied to the last known good full backup of the database, assuming a full database backup is being run daily.

Or you could stop the NT AT scheduler service from running and start up a full database backup per the database administrator's guide backup guidelines. Keep in mind that if this backup is performed during high peak database usage, users might experience a performance degradation, such as a slow response time when querying the server. Also, do not forget to restart the NT AT scheduler after the full backup completes.

Question **6. Do I really need to perform database validations?**

Answer Absolutely! If database validations are not performed, the risk of database corruptions going undetected increases. If the database if corrupted beyond repair then you will need to revert back to a known good backup. The only way you know if a backup is good is by running a database validation against it, per the validation information in Sybase's on-line help and outlined within this document. If you do not have a known good backup you may need to restart with an empty database.

Question **7. What do I do if the database validation fails?**

Answer Database validation failure indicates database file corruption. You will need to restore the database from tape from your last known good full backup. Sometimes the database file can be repaired, but if not, restoration from the last known good full database backup will be necessary.

DMI provides database restoration and repair services for a fee. Record failed table(s) and call Saturn Technical Support. DMI will open a case with Sybase, if necessary. Depending on the errors received, it may be necessary to send Sybase support a copy of your database on tape.

Sybase can handle a variety of backup tape types. The program used to copy to tape usually needs to be the NT backup utility. DMI can utilize a DLT 40/80 (Native/Compression) or less.

Specific information will be provided to you should these steps become necessary.

Security of Information

1. How is the patient information in the database protected if the database file is sent to DMI?

Answer

Access to the database is limited to database team personnel. In addition, we run a script file against the database to remove all patient identifiable data such as social security numbers and patients' names. When testing concludes the database is deleted and the tape is erased or returned.

Question

2. How does Sybase protect the patient information if we have to send the database file to them?

Answer

Only the assigned Sybase target engineer(s) has access to the database, and he or she will delete the files when the case is closed. Also, DMI has a signed non-disclosure agreement with Sybase to ensure protection of this confidential data.

Hard Drive Management

1. When will I need to upgrade my hard drive space?

Answer

It is important that up-front consideration was given to the requirements for database backup, storage, and the ability to upgrade. Capacity may be limited by the size of your database and how you clean up your server after your full database backups have been completed and validated. At a minimum it is recommended that you have enough room on your server hard drive to house three of your database files, plus room for your log files. These files include your production DB file, your backup DB file and your validation DB file. The size of the database varies greatly by site. If you do not perform regular clean-up on the backup directories, then as many as nine copies of your database file will exist, as well as many database log files from the incremental backups, when utilizing DMI's provided utilities and folder structure.

Additional hard drive space and RAM capacity may be required prior to installation of a DMI upgrade to your Saturn Information System. The database will go through a conversion, which could require free space as much as three times the size of the database file. This is due to having a database backup, temporary files and tables being created, and all of the transactions being logged into the database log file.

Question

2. When will I need to upgrade my RAM that is installed in my physical server box?

Answer

Sybase recommends your server RAM cache be set to 15 – 20% of the database file size. This value plus approximately 40MB of RAM for the operating system is the minimum RAM needed for optimal performance. The database server will start and utilize up to 90% of available RAM for database use. You will need to monitor these values and determine when it will be a performance benefit to increase your RAM.

Question

3. How large can my server database grow?

Answer

The largest size that the database can grow, as specified by Sybase's on-line documentation, depends on the largest file size allowed by your operating system. Windows NT utilizes NTFS. As of this writing, the largest running Sybase Adaptive Server Anywhere database anywhere is around 40 gigabytes. As the

database grows, performance may degrade; therefore off-line archiving of data should be implemented.

Question **4. How do I reduce the size of my database file?**

Answer You can reduce the size of your Saturn database file by performing a database unload and reload. You can either hire an outside consultant to perform this work, or contact DMI Marketing for availability and pricing for our team of engineers to do it for you.

Question **5. Can I permanently delete cases?**

Answer The permanent deletion functionality is available in Saturn version 4.0.

Question **6. Can I archive cases to another database through Saturn?**

Answer There is currently no functionality existing within Saturn to perform this function.

Saturn Technical Support

1. When should Saturn Technical Support be contacted?

Answer Saturn Technical Support should be contacted if the client is experiencing a problem with the functionality of the Saturn system. Examples of this would include:

1. 1) Software is posting errors or not functioning normally
2. 2) Loss of communication with a monitor and/or anesthesia machine
3. 3) Draeger hardware failure

Saturn Technical Support is available from 8:00AM to 5:00PM Eastern Time, Monday through Friday, excluding DMI holidays, to assist you in identifying and resolving operational problems. Saturn Technical Support may be contacted by calling (800) 543-5047 or (800) 523-6817, extension 2362. Emergency support will be available during off-hours via the same toll free telephone number, for non-functional equipment issues only.

Question **2. What information do I need to provide to support?**

Answer The following pertinent information is necessary to investigate your support calls: computer name (which can be found under the Help menu in Recorder by choosing About Recorder), date and time of occurrence, and detailed information of the problem.

If the problem involved an error, please record the text of the error if time permits. What was the user doing in Recorder when the error was posted? If the problem occurred during a case, what was the patient name and was any case data lost? Providing this type of information will assist us in identifying and resolving the issue expeditiously.

Question **3. Do I need a Purchase Order Number (PO#) to log a support call?**

Answer If the issue involves maintenance of Saturn software or a clinical bedside workstation which is under warranty or covered by a maintenance agreement then you do not need a PO#.

If the issue involves out-of-scope services or is not covered under warranty or via an on site maintenance agreement then you will need a PO# for the service authorization. Your support contact can supply you the details.

Question **4. What is covered under our Maintenance Agreement?**

Answer The maintenance agreement covers Saturn software and associated clinical workstation hardware for use at the patient bedside. Maintenance of all non-clinical hardware (includes server, non-clinical workstations, printers, etc.) is the responsibility of the customer. For additional details, contact Saturn Technical Support or your project manager.

Writing Reports **1. Can I write my own reports against the Saturn database?**

Answer Yes. You have been provided with a user group (Reports) and a user (Reporter) to be utilized for your own report writing against the server database. The 'Reporter' user has select rights to all Saturn tables.

Question **2. Can I modify or add to the Saturn database schema?**

Answer You may not modify any existing database structure that is provided during the Saturn installation or during any Saturn upgrades.

DMI recommends that you do not modify the database schema because it could adversely affect performance of your Saturn System. Also, any changes you would make to the database schema may be destroyed during a database upgrade, when a new Saturn version is being installed.

Any Saturn Technical Support services you would require as a result of your database schema modifications are your sole responsibility, and hourly support charges would apply.

As an alternative, you may want to consider creating a second database and populating it with the Saturn database information you wish to manipulate.

Contact Saturn Technical Support for more information (see Saturn Technical Support in the previous section for phone numbers).

Miscellaneous **1. How do I get my desired changes into a future release of Saturn?**

Answer Contact Saturn Technical Support and they will log your enhancement request. Your enhancement request is forwarded to Saturn Marketing for implementation consideration into future Saturn software releases.

Question **2. Can I change my server or any workstations', clinical or non-clinical, domain name, TCPIP address, or UNC name?**

Answer Absolutely not! The system's functionality is dependent upon these three items being consistent, and remaining the same as originally installed. If any changes are requested then they must first be approved by Saturn Technical Support.

Question **3. What do I do if I receive a Dr. Watson error on the server?**

Answer Write down the error message. If the error is due to dbsrv7.exe, dbisqlc.exe, or scview.exe then call Saturn Technical Support. We will need to download some log files to analyze why the error occurred. Then the server will need to be rebooted. The Saturn server service, named PCAPPS_Server, will start up automatically during reboot and the workstations will reconnect to the server database on their next attempt.

Also refer to the Sybase document *"I've got an assertion! What should I do?"*. It's located at:

http://www.sybase.com/detail/1,3693,1010805,00.html

Question **4. Can I change the system time on the individual workstations?**

Answer Manual configuration of the time on the workstation is not recommended. Your client workstations are configured to synchronize their time with the server's time on reboot. If you feel the time of the Saturn workstation is incorrect, try rebooting the unit using the File Exit menu options.

Question **5. Does DMI provide antivirus protection software?**

Answer No. The customer should follow conventional hospital practice for protecting networked hospital systems.

List of Recommended Readings and Useful Resources

The following is recommended reading for the Saturn Administrator(s):

Sybase On-Line Help Chapters

For Backups: User's Guide Chapter 21: Backup and Data Recovery

For Report Writing: User's Guide Part Two – Working with Databases, Chapters 4 – 8; and Part Four – Adding Logic to the Database, Chapter 15 – Using Procedures.

Sybase Web

Go to http://www.sybase.com/support and Select Newsgroups under Support Services. Then select Mobile & Wireless. This will give you a listing of SQL Anywhere Studio newsgroups. Select the sybase.public.sqlanywhere.general newsgroup and you will have access to post questions about Adaptive Server Anywhere.

Also see Technical Documents and Product Manuals under Support Services, and look for subjects pertaining to SQL Anywhere or Mobile & Wireless.

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Dräger

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List Manager

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What Is List Manager?

List Manager is a software application for the Saturn Administrator to use in creating and tailoring the lists you use in the Saturn applications, such as lists of drugs, events, procedures, and surgeons. List Manager also enables the Saturn Administrator to create groups and subgroups of lists that organize the list items into clearly defined categories (e.g., groups for the Drugs list could be “Narcotics”, “Reversal”, “Induction”, and “Cardiac”).

Note: It is the Saturn Administrator's responsibility to establish the level of security and training to ensure the authenticity, integrity, and confidentiality of the electronic records.

A Windows NT and Windows 2000 Application

List Manager operates on personal computers under the Microsoft® Windows NT® and Windows 2000® operating systems. Saturn Administrators who have experience using Windows NT, Windows 95®, or Windows 2000 will find that the application works much like any other Windows-based application. Administrators and users will also find many familiar Windows features in the List Manager interface.

Part of the Saturn Information System

List Manager is part of the Saturn Information System. Saturn also includes the Recorder, Environment Manager, Report Manager, and Case Manager applications. See Section 1, Introducing the Administrator's Guide, for a description of each of these Saturn applications.

What's New in List Manager

The following describes new features in Version 4 of the List Manager program:

- When configuring the system in List Manager, there is a new option for adding the CCOW Patient Context Manager (refer to the CCOW Patient Context Manager section in the Saturn Recorder's User's Guide for more about CCOW). This option — CCOW Application Key Name — is found on the General page of the System Configuration dialog box.
- A new security right is available when configuring staff in the Staff Entry and Staff Group Entry dialog boxes (Figure 4-52 and Figure 4-53 on page 4-33). This right allows you to assign a user the right to purge (permanently erase) cases in the Case Manager program. In addition, Service rights, which allows the user to change the workstation configuration information from the Utilities menu, was renamed to Workstation Configuration.
- Appendix B provides a list of all Saturn supported monitors and their compatible software version(s). Draeger Medical part numbers for cables are included as well.

Where Do I Use List Manager?

You can use List Manager on any PC or workstation in your hospital that is connected to the information systems network. List Manager can be installed on a server or on an individual PC. It can be configured as a clinical system so that it is accessible from the Utilities menu of Recorder, and it can be configured as a nonclinical system so that it runs as a stand-alone application.

The Network

Because List Manager operates in a network environment with a centralized database, you can access and update your list data from any workstation or PC that is part of the network. Refer to Figure 1-1. The Saturn Information System Network on page 1-4 in Introducing the Administrator's Guide in this manual for a look at the Saturn network environment.

Workstations

A Recorder workstation is a PC/AT-compatible computer that meets certain minimum hardware requirements. Any of the following input devices may be available at a Recorder workstation: touch screen, mouse, or keyboard.

The Saturn Clinical Workstation

The Saturn Clinical workstation is a special workstation, intended for use in the operating room, that is available from Draeger Medical, Inc. This workstation has the following features:

- It has a touch screen with large controls for special OR displays. This enables you to use your fingers, as well as a stylus or some other pointing device, to interact with the OR displays.
- It can be configured to run the List Manager application from the Utilities menu.
- It contains an isolation transformer, which meets the leakage current specifications of the UL and CSA Standards for medical equipment.

- It has an uninterruptable power supply (UPS), which manages system software during interruptions of AC-mains current. The uninterruptable power supply helps to ensure continuous operation of the software and prevents the need to reboot the system in the event of a short AC power failure.
- It utilizes opto-isolation serial ports, which prevent ground loops and leakage current from external devices into the workstation.
- It contains a control status card, which monitors and controls speaker functions (if speakers are used), measures and reports on the temperature in the processor, and provides an error recovery mechanism in the event of a system malfunction.

How Do I Use This Manual?

This manual explains how to use the List Manager application.

Manual Organization

The manual is organized sequentially to mirror the steps you might take in a typical situation. However, because no user or situation is truly typical, you can skip around in both the application and the manual.

Conventions

This manual uses standard typographical and keyboard conventions to help you interpret the information presented. These conventions are described in the following table.

Table 1-1. Typographical and Keyboard Conventions

Convention	Used For	Example
Helvetica Type	Window controls, such as entry fields, menu options, and toolbar buttons.	In the Last field, enter the patient's last name.
Small Capitals	Keyboard keys.	To display a menu, press the ALT key, then the underlined letter in the menu name.
Italics	A generic data description, for which you or the system substitutes a specific value.	Enter the time in *hh:mm* format.
Monospace Type	Messages displayed by the system.	If you receive the message **`Case in Use`**, the case is already open.
Comma (,) between key names	Keyboard keys that you press one after the other. (Press the first key and release it. Then press the second key and release it.)	To display the File menu, press ALT, F.
Plus sign (+) between key names	Keyboard keys that you press simultaneously. (Press the first key and, while holding it, press the second key. Then release both keys.)	Press the TAB key (SHIFT+TAB to move backward) until the button is highlighted.

2

Starting List Manager

This section describes security issues that affect your access to List Manager, as well as how to start and log on to List Manager.

Security 2-2
Starting List Manager from a Clinical Workstation 2-2
Starting List Manager from a Nonclinical Workstation..... 2-3

Security

List Manager is accessible from the Utilities menu of Recorder and as a stand-alone application. The Saturn Information System provides a level of security that ensures only authorized users are able to access the List Manager program.

Access to List Manager

Logon security controls access to List Manager. The Saturn Administrator assigns a user ID, password, and security level to each person in the Saturn Information System, and only users with a recognized ID and password combination can log on to List Manager. Refer to Figure 4-52 on page 4-33 for further details.

Starting List Manager from a Clinical Workstation

You can launch List Manager from the Utilities menu of Recorder when Recorder is configured at a clinical workstation. The application logon name and password from Recorder is automatically passed on to List Manager. At clinical workstations, Recorder starts automatically when you turn on the computer; you do not have to start it. However, at any other workstation, you may have to start Recorder.

If the user has administrator or List Manager privileges, the Main window of List Manager will be displayed when you select List Manager from the Recorder Utilities menu. If the user does not have administrator or List Manager privileges, then a message appears stating that the application is not available to the user.

Prerequisites

The following prerequisites apply to this function:

- List Manager must be installed at your facility.
- You must be an authorized Recorder and List Manager user and have a valid user ID and password in order to start List Manager automatically through Recorder.

Note: You must be at a nonclinical workstation in order to start Recorder and List Manager manually (i.e., from the Destktop, etc.).

Procedure

To start List Manager from the Recorder Utilities menu, follow the procedure for the input device you are using:

Touch Screen	Tap the Utilities menu in Recorder. Tap List Manager.
Mouse	Click the Utilities menu in Recorder. Click List Manager.
Keyboard	To display the Utilities menu, press ALT, U. When the menu appears, press the UP or DOWN ARROW key to highlight List Manager, then press the ENTER key. Or, press L.

Starting List Manager from a Nonclinical Workstation

Before you can use List Manager, you must log on. The logon process ensures that only authorized users can access the application.

Note: You must be at a nonclinical workstation in order to start Recorder and List Manager manually (i.e., from the Destktop, etc.).

Prerequisite

You must be an authorized List Manager user and have a valid user ID and password. The password is case sensitive, so make sure you know which letters are upper case and which are lower case.

Procedure

Follow these steps to log on to List Manager.

1. To start List Manager at a nonclinical workstation, follow the procedure for the input device you are using:

Touch Screen	Double-tap the List Manager icon on the Windows NT desktop. –Or– Tap the List Manager icon to select it and press the ENTER key.
Mouse	Double-click the List Manager icon on the Windows NT desktop.
Keyboard	With the ARROW keys, select the List Manager icon on the Windows NT desktop, and then press the ENTER key.

   The Logon dialog box appears (Figure 2-1 on page 2-3).

Figure 2-1. Logon Dialog Box

2. In the User Logon field, select or type your user ID.
3. In the Password field, type your password. Make sure to type all letters in the correct case. For security purposes, asterisks are displayed instead of the password that you type.
4. Press the OK button. The List Manager Main window appears (Figure 2-2). You are logged on to List Manager.

MainScreen

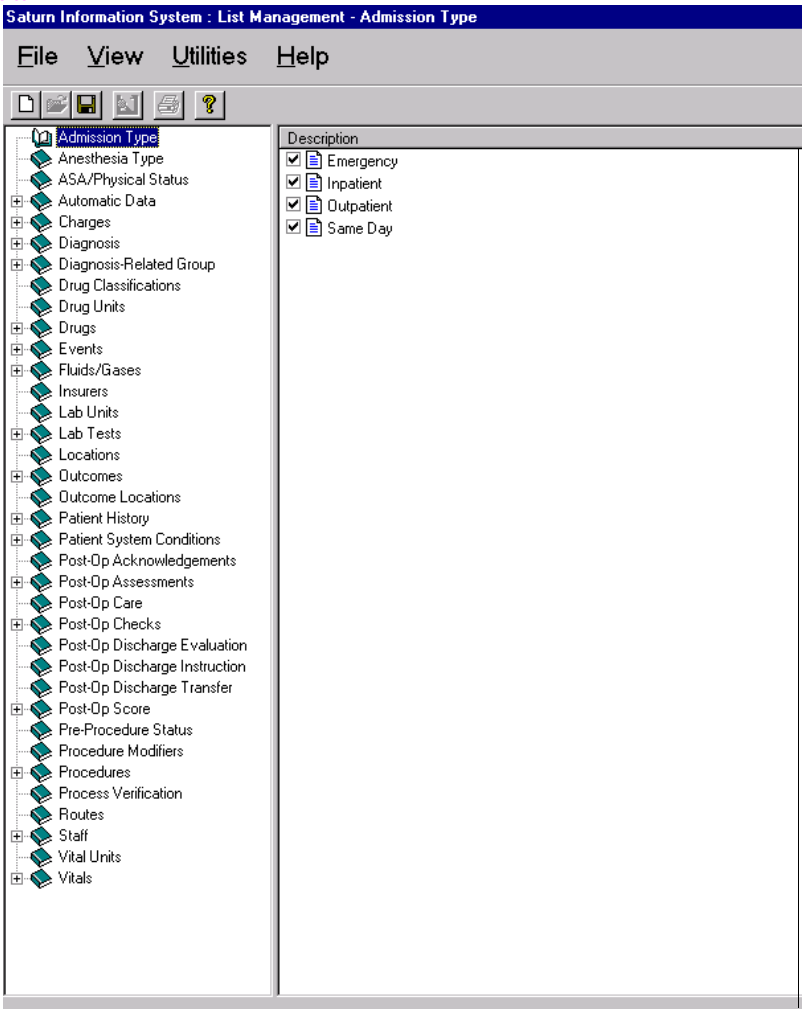

Figure 2-2. List Manager Main Window

3 Understanding List Manager's Main Window

This section discusses List Manager's Main window features and how to modify the Main window display.

Main Window Features 3-2
- Main Window 3-2
- Tree Control Window 3-3
- List Control Window 3-4
- Title Bar 3-4
- Menu Bar 3-5
- Context Menu 3-6
- Choosing a Menu Item 3-6
- Toolbar 3-8
- Status Bar 3-8
- Sort Headers 3-9
- Required Fields 3-9

Modifying the Main Window Display 3-10
- Displaying and Hiding the Toolbar 3-10
- Displaying and Hiding the Status Bar 3-10
- Resizing the Tree and List Control Window Areas 3-10

Main Window Features

List Manager provides a graphical user interface in its Main window that makes creating and tailoring the lists you use in the Saturn Information System applications easy. Its use of standard Windows-type features provides a familiar look and feel, so that you may be able to start using the application right away.

Main Window

When List Manager is running, its Main window is displayed (Figure 3-1). The Main window is comprised of two list areas: the Tree Controls area and the List Controls area. Because the Main window is always open, its title bar, menu bar, toolbar, and status bar are always available to you. However, you can hide the toolbar and status bar using the View menu. This is described later in this section.

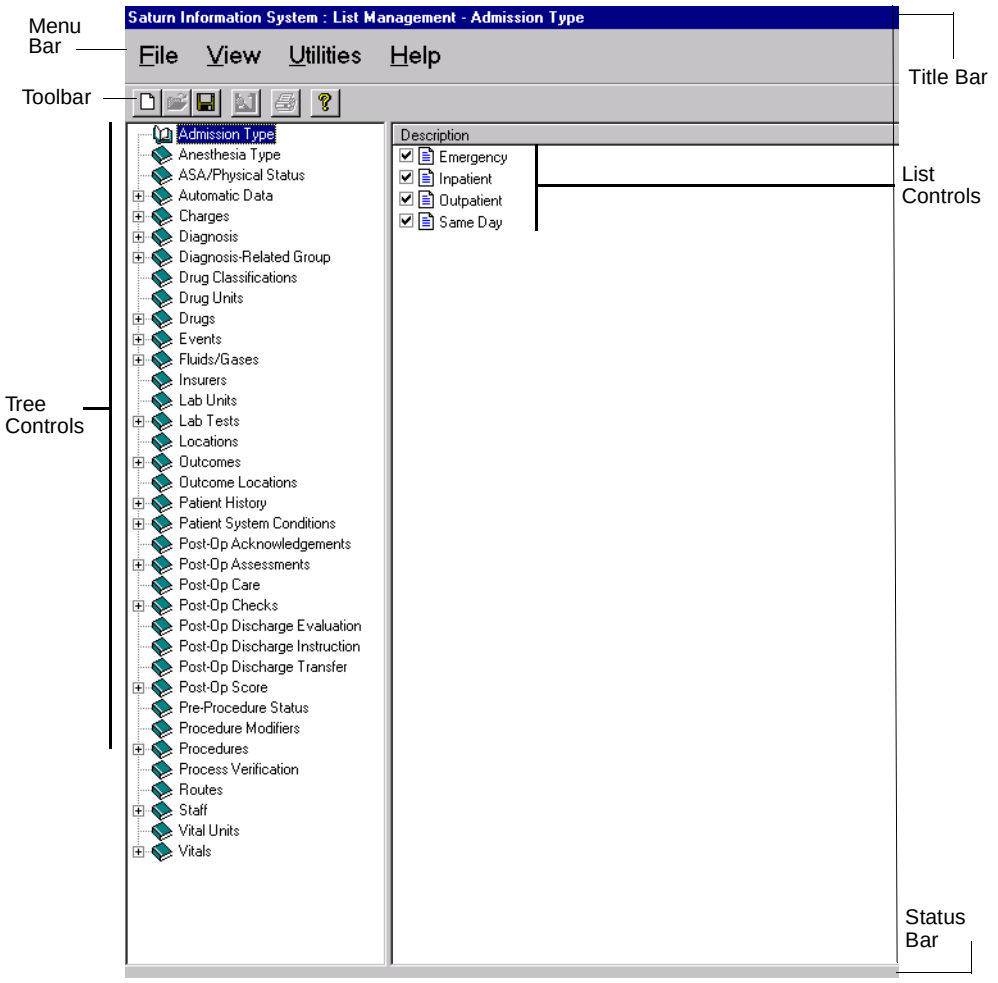

Figure 3-1. List Manager's Main Window

Tree Control Window

The Tree Control window appears below the toolbar on the left side of the Main window (Figure 3-2). It displays the hierarchical list of Saturn Information System site lists in alphabetical order. Each site list appears with a book icon and a label that describes the list.

There are several types of site lists. Refer to "Viewing Site Lists, Groups and List Items" on page 4-2 for more information.

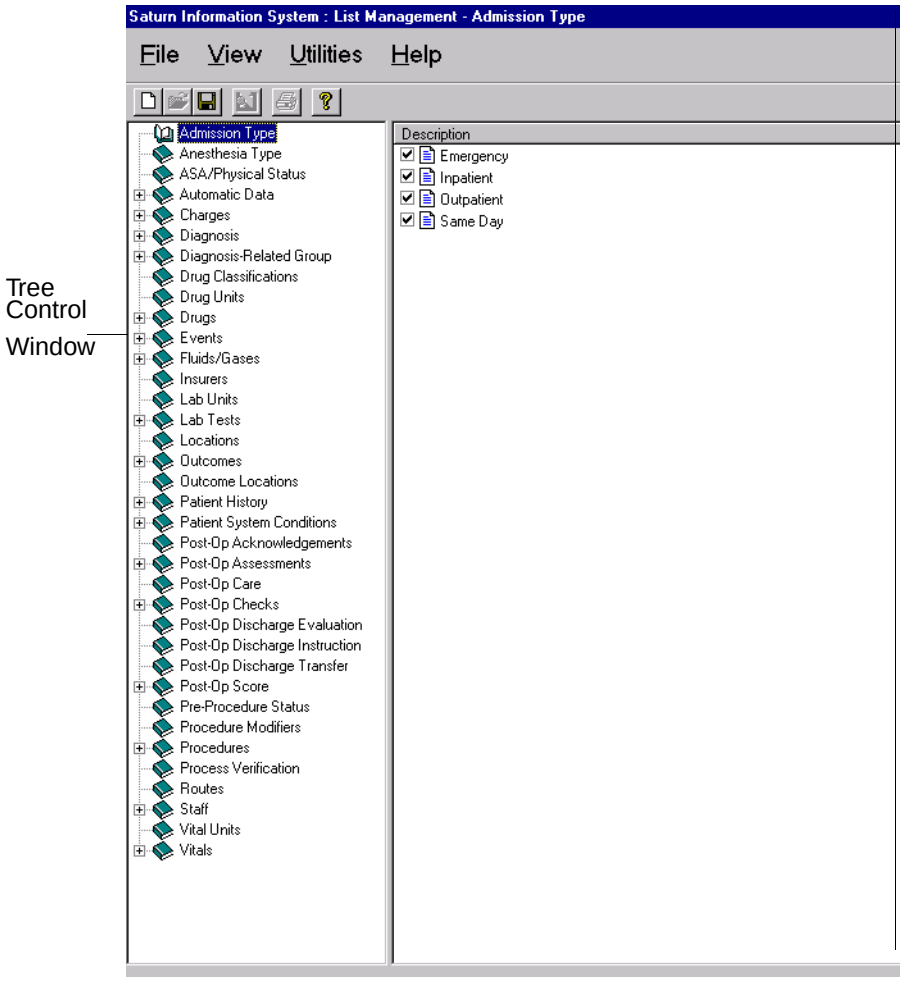

Figure 3-2. Site Lists in the Tree Control Window

List Control Window

The List Control window appears below the toolbar on the right side of the Main window (Figure 3-3). When you select a site list (with or without groups) in the Tree Control window, the list items or (or its groups) appear in the List Control window.

Note: Site lists without groups are described in Section 4.

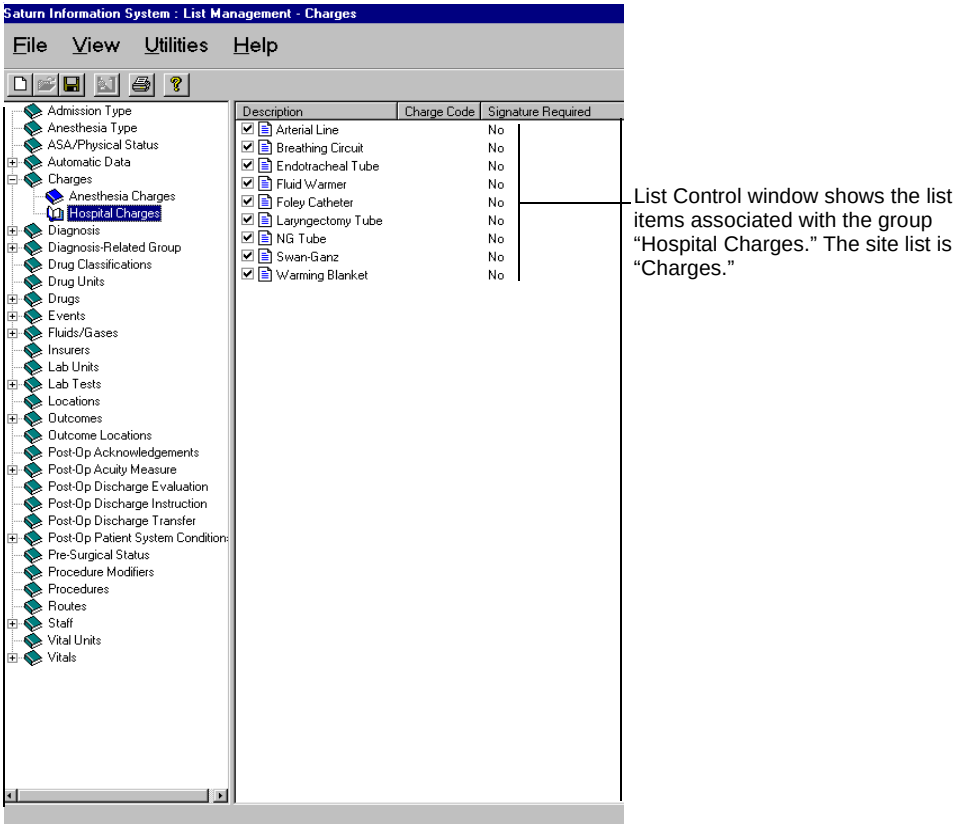

Figure 3-3. List Items in the List Control Window

Each list item in the List Control window appears with a check box, a sheet-of-paper icon, and a label describing the item. An item can be selected or deselected by checking or clearing the check box. The default for each list item is "selected" (checked).

When the item is checked, it is "active" or available for selection in other Saturn applications; when the item is not checked, the item is not available for selection in other Saturn applications. Item labels can be edited using their Edit dialog boxes (see "Editing Existing Groups and List Items" on page 4-13 for more information).

Title Bar

The title bar identifies the List Manager application and the name of the selected list. In Figure 3-3, the list name "Charges" appears in the title bar.

Menu Bar

The menu bar (Figure 3-1 on page 3-2) contains individual menus (Table 3-1) that you can open. Each open menu, in turn, contains items or selections that you can choose to initiate an action. For example, some of the selections on the File menu let you create a new list, open an existing list, and edit an existing list.

Note: Menu items followed by an asterisk (*) are available only on a nonclinical workstation..

Table 3-1. List Manager Menu Items

Menu Name	Menu Item	Description
File	New	Creates a new group, subgroup, or list item depending on whether a group, subgroup, or list item is displayed in the list control window.
	Open	Allows you to add items to any list in the List Control window. Displays a dialog box in Edit mode for the item if it has an associated dialog box; or, places the label into Edit mode if the item does not have an associated dialog box.
	Move	For lists having groups and subgroups, enables you to move an item between groups and subgroups.
	Save	Saves the changes made to the selected list.
	Find	Searches all of the lists for a text string and returns all found occurrences of the string as well as the list that contains the text string. (Available in a future release of List Manager)
	Print*	Prints the selected list's report to the selected printer.
	Print Preview*	Provides you with a preview of the printed list report.
	Exit	Exits you from List Manager.
View	Toolbar	Enables you to choose whether or not the toolbar is displayed.
	Status Bar	Enables you to choose whether or not the status bar is displayed.
	Split	Enables you to move the splitter bar that appears between the Tree Control window and the List Control window to increase or decrease the viewing areas.
Utilities	System Configuration	Displays the System Configuration notebook that contains system general and required field information.

Table 3-1. List Manager Menu Items (continued)

Menu Name	Menu Item	Description
Help		
	About List Management	Displays the About dialog box that displays List Manager's name, release number, and copyright information.

Context Menu

The context menu provides you with quick access to some of the key menu selections by clicking an item in the List Control window with the right button on your mouse. The context menu appears on the screen where the cursor was resting at the time of the mouse click.

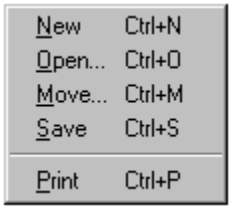

Figure 3-4. Context Menu

Choosing a Menu Item

Use the method in Table 3-2 that corresponds to your input device to choose or select a menu item.

Table 3-2. Choosing a Menu Item

Input Device	Method
Touch Screen	On the menu bar, tap a menu name (File, View, etc.) to display the menu. Then tap a menu item.
Mouse	On the menu bar, click a menu name (File, View, etc.) to display the menu. Then click a menu item. To select a menu item from the Context menu, click the right mouse button over a list item; the Context menu is displayed. Then click a menu item.

Table 3-2. Choosing a Menu Item (continued)

Input Device	Method
Keyboard	To display a menu, press the ALT key and then the key that corresponds to the underlined letter in the menu name (i.e., F for File, V for View, etc.). When the menu appears, do one of the following: • Press the UP or DOWN ARROW key to highlight an item, then press the ENTER key. • Press the key that corresponds to the underlined letter in an item name. *Example:* You want to choose the New option on the File menu. Press ALT and then F (ALT,F) to display the File menu. Then, either press the N key, or highlight New and press ENTER. *Note:* Some menu items have keyboard accelerators. If an item has a keyboard accelerator, it is shown on the menu to the right of the item name. For New Item, the keyboard accelerator is CTRL+N.

Toolbar

The toolbar (Figure 3-6) is located just beneath the menu bar. The buttons on the toolbar duplicate the functionality of certain menu selections (from left to right: New, Open, Save, Find, Print, and Help). They give you ready access to functions that you use frequently or need to implement quickly. Buttons that are available or active have dark text and graphics. Buttons that are not available or inactive have light text and graphics.

Figure 3-5. Toolbar

Pressing a Toolbar Button

Use the method in Table 3-3 that corresponds to your input device to press a toolbar button.

Table 3-3. Pressing a Toolbar Button

Input Device	Method
Touch Screen	Tap the button.
Mouse	Click the button.
Keyboard	All toolbar buttons duplicate some of the options on the File menu, where you can select them using the keyboard (see Table 3-2 on page 3-6). These menu items also have keyboard shortcuts (pressing ALT, F and then the underlined letter), and accelerator keys (pressing CTRL and the first letter of the menu item, as shown to the right of the option on the File menu). **Toolbar Button** — **Menu Item/Kybd Shortcut/Accel.** New — File:New/ALT, F, N/CTRL+N Open — File:Open/ALT, F, O/CTRL+O Save — File:Save/ALT, F, S/CTRL+S Find — File:Find/ALT F, F/CTRL+F Print — File:Print/ALT F, P/CTRL+P

Status Bar

The status bar (Figure 3-1 on page 3-2) shows whether the CAPS LOCK, NUM LOCK, or SCROLL LOCK keys are selected. If they are, CAP, Num and SCRL appear in the status bar. If none of these keys are selected, the status bar remains blank.

Sort Headers

List Manager dialog boxes and screen areas include lists with sort headers. Sort headers have a dual purpose. In addition to their traditional use as column headers, they also function as sort keys that enable you to change the order of a list.

Example: If you select a group of the Diagnosis site list in the Tree Control window, the Diagnosis site list shows two sort headers in the List Control window: Diagnosis Code and Diagnosis Description. The diagnosis list in Figure 3-7 is sorted by Diagnosis Code (numerically). To sort by Diagnosis Description (alphabetically), press the Diagnosis Description sort header.

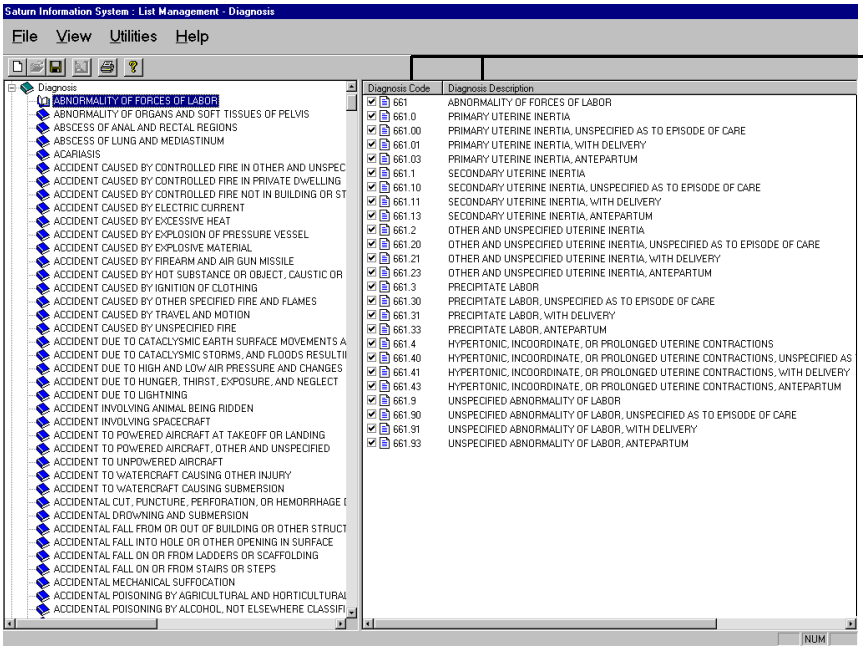

Figure 3-6. Sort Headers

Required Fields

Dialog box fields that have an asterisk (e.g., To*: in Figure 3-8) are required fields that must be completed before information can be accepted by List Manager.

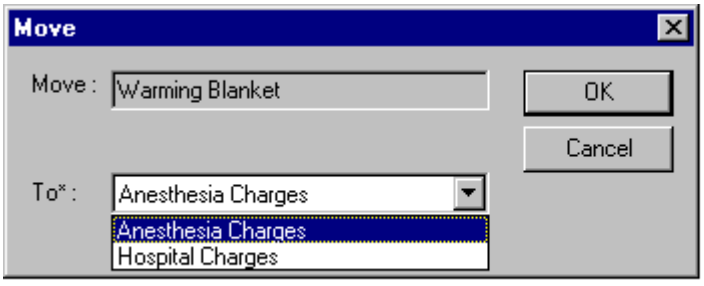

Figure 3-7. Required Field

Modifying the Main Window Display

You can modify the Main window display by:

- Displaying or hiding the toolbar
- Displaying or hiding the status bar
- Resizing the Tree Control and List Control window areas

Displaying and Hiding the Toolbar

You can display the toolbar by selecting Toolbar from the View menu (Figure 3-8). Deselecting Toolbar (i.e., clearing the check mark) causes List Manager to hide the toolbar.

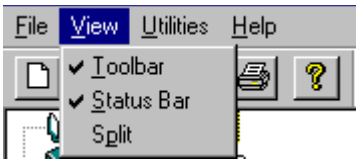

Figure 3-8. View Menu

Displaying and Hiding the Status Bar

You can display the status bar by selecting Status Bar from the View menu (Figure 3-8). Deselecting Status Bar causes List Manager to hide the status bar.

Resizing the Tree and List Control Window Areas

You can resize the Tree and List Control window areas by selecting Split from the View menu (Figure 3-8). This automatically selects the splitter bar so that you can reposition it on the Main window by clicking, touching, or using the ARROW keys, depending on your input device. You can also reposition the splitter bar anytime by clicking it using the mouse and repositioning it by dragging it to the desired location in the Main window.

The Tree Control window in Figure 3-9 has been expanded to better view the groups associated with the Diagnosis site list.

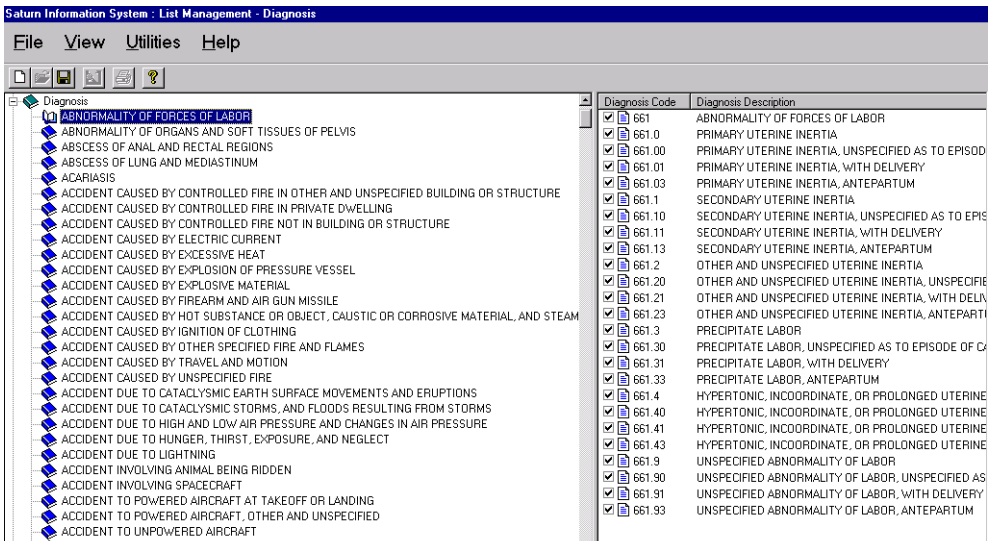
Saturn Information System : List Management - Diagnosis
File View Utilities Help
Diagnosis
ABNORMALITY OF FORCES OF LABOR
ABNORMALITY OF ORGANS AND SOFT TISSUES OF PELVIS
ABSCESS OF ANAL AND RECTAL REGIONS
ABSCESS OF LUNG AND MEDIASTINUM
ACARIASIS
ACCIDENT CAUSED BY CONTROLLED FIRE IN OTHER AND UNSPECIFIED BUILDING OR STRUCTURE
ACCIDENT CAUSED BY CONTROLLED FIRE IN PRIVATE DWELLING
ACCIDENT CAUSED BY CONTROLLED FIRE NOT IN BUILDING OR STRUCTURE
ACCIDENT CAUSED BY ELECTRIC CURRENT
ACCIDENT CAUSED BY EXCESSIVE HEAT
ACCIDENT CAUSED BY EXPLOSION OF PRESSURE VESSEL
ACCIDENT CAUSED BY EXPLOSIVE MATERIAL
ACCIDENT CAUSED BY FIREARM AND AIR GUN MISSILE
ACCIDENT CAUSED BY HOT SUBSTANCE OR OBJECT, CAUSTIC OR CORROSIVE MATERIAL, AND STEAM
ACCIDENT CAUSED BY IGNITION OF CLOTHING
ACCIDENT CAUSED BY OTHER SPECIFIED FIRE AND FLAMES
ACCIDENT CAUSED BY TRAVEL AND MOTION
ACCIDENT CAUSED BY UNSPECIFIED FIRE
ACCIDENT DUE TO CATACLYSMIC EARTH SURFACE MOVEMENTS AND ERUPTIONS
ACCIDENT DUE TO CATACLYSMIC STORMS, AND FLOODS RESULTING FROM STORMS
ACCIDENT DUE TO HIGH AND LOW AIR PRESSURE AND CHANGES IN AIR PRESSURE
ACCIDENT DUE TO HUNGER, THIRST, EXPOSURE, AND NEGLECT
ACCIDENT DUE TO LIGHTNING
ACCIDENT INVOLVING ANIMAL BEING RIDDEN
ACCIDENT INVOLVING SPACECRAFT
ACCIDENT TO POWERED AIRCRAFT AT TAKEOFF OR LANDING
ACCIDENT TO POWERED AIRCRAFT, OTHER AND UNSPECIFIED
ACCIDENT TO UNPOWERED AIRCRAFT
Diagnosis Code
Diagnosis Description
661 ABNORMALITY OF FORCES OF LABOR
661.0 PRIMARY UTERINE INERTIA
661.00 PRIMARY UTERINE INERTIA, UNSPECIFIED AS TO EPISOD
661.01 PRIMARY UTERINE INERTIA, WITH DELIVERY
661.03 PRIMARY UTERINE INERTIA, ANTEPARTUM
661.1 SECONDARY UTERINE INERTIA
661.10 SECONDARY UTERINE INERTIA, UNSPECIFIED AS TO EPIS
661.11 SECONDARY UTERINE INERTIA, WITH DELIVERY
661.13 SECONDARY UTERINE INERTIA, ANTEPARTUM
661.2 OTHER AND UNSPECIFIED UTERINE INERTIA
661.20 OTHER AND UNSPECIFIED UTERINE INERTIA, UNSPECIFIE
661.21 OTHER AND UNSPECIFIED UTERINE INERTIA, WITH DELI
661.23 OTHER AND UNSPECIFIED UTERINE INERTIA, ANTEPARTI
661.3 PRECIPITATE LABOR
661.30 PRECIPITATE LABOR, UNSPECIFIED AS TO EPISODE OF C
661.31 PRECIPITATE LABOR, WITH DELIVERY
661.33 PRECIPITATE LABOR, ANTEPARTUM
661.4 HYPERTONIC, INCOORDINATE, OR PROLONGED UTERINE
661.40 HYPERTONIC, INCOORDINATE, OR PROLONGED UTERINE
661.41 HYPERTONIC, INCOORDINATE, OR PROLONGED UTERINE
661.43 HYPERTONIC, INCOORDINATE, OR PROLONGED UTERINE
661.9 UNSPECIFIED ABNORMALITY OF LABOR
661.90 UNSPECIFIED ABNORMALITY OF LABOR, UNSPECIFIED AS
661.91 UNSPECIFIED ABNORMALITY OF LABOR, WITH DELIVERY
661.93 UNSPECIFIED ABNORMALITY OF LABOR, ANTEPARTUM

Figure 3-9. Resizing the Main Window Areas

4

Working with Lists

This section explains how to view, change, and add groups or list items in List Manager.

Viewing Site Lists, Groups and List Items 4-2
Moving List Items Between Groups 4-8
Adding List Items to a Site List or Its Associated Groups 4-10
Creating New Groups 4-11
Editing Existing Groups and List Items 4-13
Saving a List 4-16
Entry Dialog Boxes 4-17

Viewing Site Lists, Groups and List Items

Site lists are lists that are designated to be used by one or several hospital departments or locations. For example, a Holding, Intra-Op or Post-Op workstation can use the Drugs site list shown in the Tree Control window (Figure 4-1). However, the drugs that you make available for selection at those workstation types is determined in List Manager. Many list items that you choose will be selectable at all workstations.

Some site lists have *groups* and *subgroups* associated with them. These site lists are indicated with a plus (+) sign next to them, such as the Charges list. Other site lists have no groups associated with them, such as the Admission Type list, which has no plus (+) sign next to it.

Site Lists with no Groups

A site list in the Tree Control window that does not have groups assigned to it appears with no plus (+) sign, such as the Admission Type list in Figure 4-1. When you select Admission Type in the Tree Control window, its list items appear in the List Control window (Emergency, Inpatient, Outpatient, and Same Day in Figure 4-1). The sheet-of-paper icon indicates the individual *list items* for that site list.

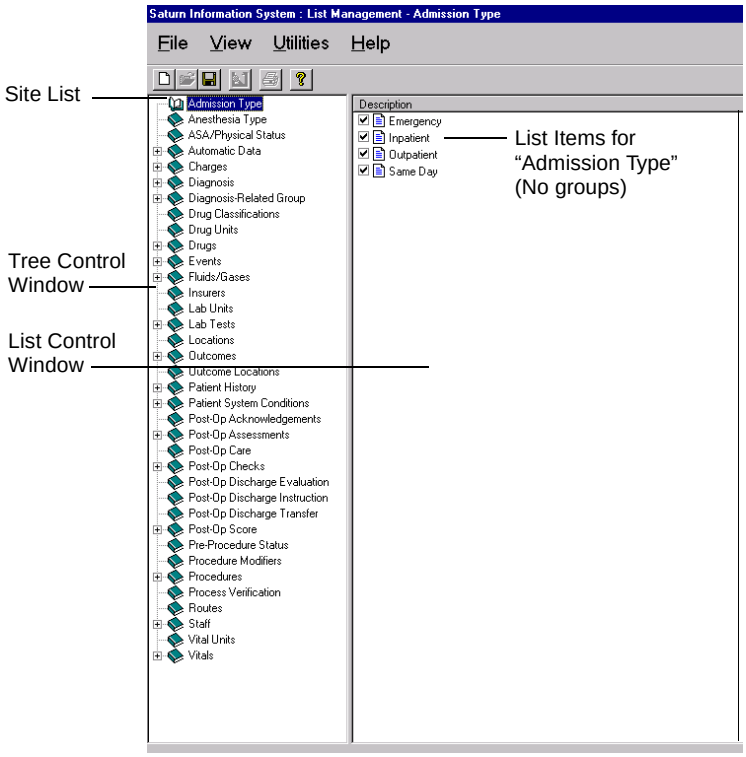

Figure 4-1. Site List with No Groups

Prerequisite

The List Manager Main window must be displayed on the screen. Refer to Starting List Manager on page 2-1 for more information.

Procedure

To view a site list with no groups associated with it, follow the procedure for the input device you are using:

Touch Screen	Tap the book icon (with no plus sign) in the Tree Control window.
Mouse	Click the book icon (with no plus sign) in the Tree Control window.
Keyboard	With the UP and DOWN ARROW keys, select the book icon (with no plus sign) in the Tree Control window.

Note: The book icon changes from a "closed" book to an "open" book, and the list items appear in the List Control window.

Site Lists with Groups

Each site list in the Tree Control window can have *groups* associated with it. Site lists with groups appear with a plus sign (+) to the left of them. When you select or highlight a site list in the Tree Control window (without selecting its plus sign), its groups appear in the List Control window (Figure 4-2). When you select the plus sign, the groups also appear in the Tree Control window (Figure 4-2).

For example, groups for the Charges site list are "Anesthesia Charges" and "Hospital Charges," as shown in Figure 4-2.

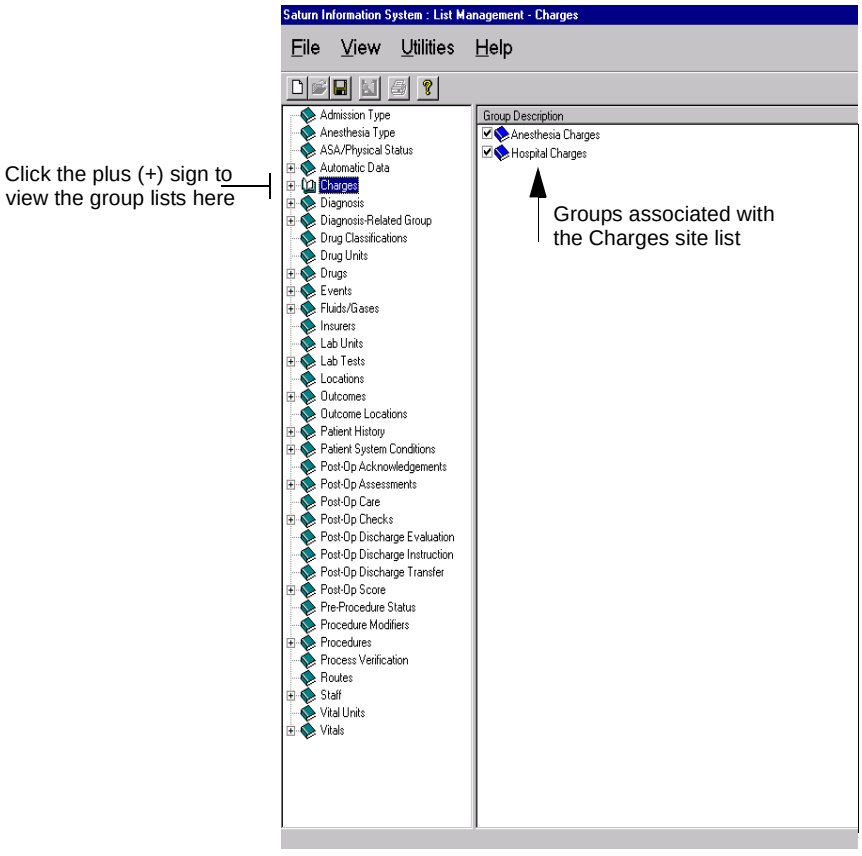

Figure 4-2. Site List with Groups

Prerequisite

The List Manager Main window must be displayed on the screen. Refer to Starting List Manager on page 2-1 for more information.

Procedure

Perform the following to view a group and its list items.

1. Select or highlight a site list that has a plus sign in the Tree Control window according to your input device:

Touch Screen	Tap the book icon (with a plus sign next to it) in the Tree Control window.
Mouse	Click the book icon (with a plus sign next to it) in the Tree Control window.
Keyboard	With the UP and DOWN ARROW keys, select a book icon (with a plus sign) next to it in the Tree Control window. Then press the RIGHT ARROW key. (Press the LEFT ARROW key to restore the plus sign.)

   The groups associated with that site list are displayed in the List Control window. You can see if the groups are active or not, depending on whether the check box next to each group is checked (active), or not checked (inactive).

   Note: If you select the plus sign next to this site list in the Tree Control window, the groups are also displayed in the Tree Control window.

2. Select or highlight a group in the Tree Control window.

   Note: Groups are indicated by a blue book icon.

   The list items for the group you selected appear in the List Control window. You can see if the groups are active or not, depending on whether the check box next to each group is checked (active), or not checked (inactive).

   Note: No check boxes appear in the list control window for Automatic Data and Drug Units. These list items are not editable (except for color background for Automatic Data list items), thus they are always active.

Site Lists with Subgroups

In addition to a site list having several groups associated with it, the Procedures groups have *subgroups*. Each group that has subgroups has a plus (+) sign next to it in the Tree Control window (Figure 4-3). (Groups are indicated by a blue book icon; subgroups are indicated by a purple book icon.) When you select a subgroup in the Tree Control window, the subgroup's list items appear in the List Control window (Figure 4-3).

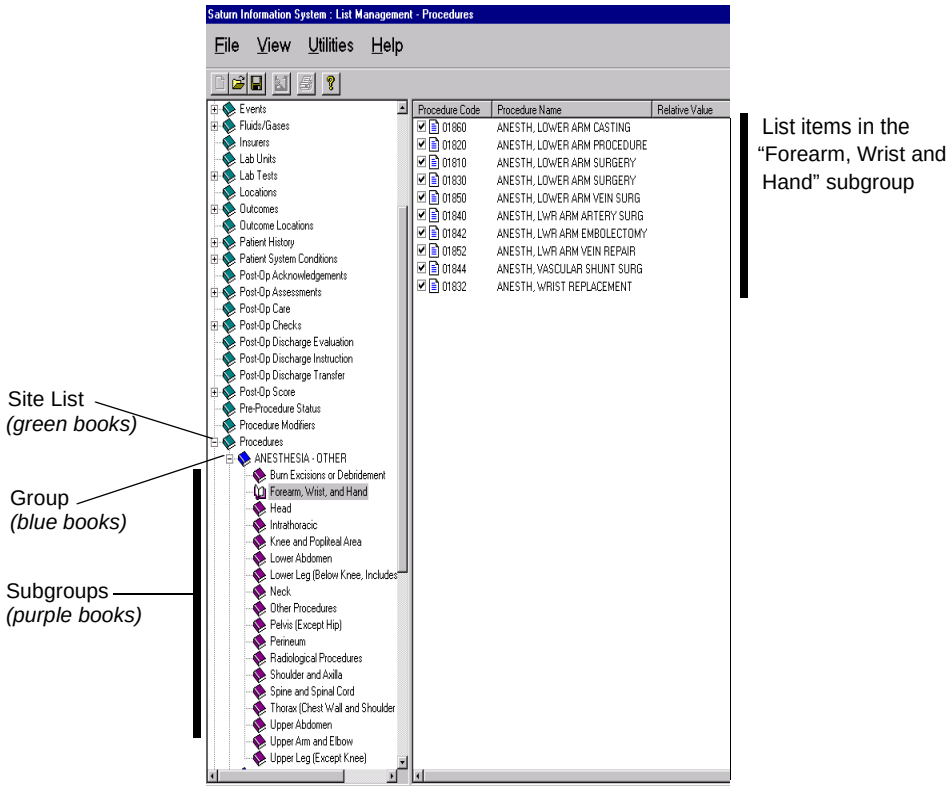

Figure 4-3. Site List with Groups and Subgroups

Prerequisite

The List Manager Main window must be displayed on the screen. Refer to Starting List Manager on page 2-1 for more information.

Procedure

Perform the following to view a subgroup and its list items.

Note: Since the Procedures site list is the only site list with subgroups, it is used in the example below.

1. Select or highlight the Procedures list in the Tree Control window.

   The groups associated with that site list are displayed in the List Control window. You can see if the groups are active or not, depending on whether the check box next to each group is checked (active), or not checked (inactive).

2. Select the plus sign next to Procedures in the Tree Control window. The groups associated with the Procedures site list appears.

3. Select or highlight a group in the Tree Control window. The subgroups appear in the List Control window.

Note: Subgroups are indicated by a purple book icon.

4. Select the plus sign next to the group you just selected in the Tree Control window. The subgroups are displayed (Figure 4-3 on page 5).
5. Select a subgroup in the Tree Control window. The list items associated with that subgroup appear in the List Control window (Figure 4-3 on page 5).

   You can see if the groups are active or not, depending on whether the check box next to each group is checked (active), or not checked (inactive).

Site List Properties

The following table identifies each site list and whether or not it has associated groups or subgroups; if the list items can be moved, added, and edited; if new groups can be created; and which users can be configured to enter this information in the Recorder program. Refer to the key legend following the table.

Table 4-1. List Manager's Site List Properties

Site List Name	Groups Sub-groups	Move	Add	Edit	Create Groups	Users
Admission Type	N	N	Y	Y	N	A
Anesthesia Type	N	N	Y	Y	N	A
ASA/Physical Status	N	N	Y	Y	N	PRE
Automatic Data	Y	N	N	1	N	H, I, P
Charges	Y	Y	Y	Y	Y	ALL
Diagnosis	Y	Y	Y	Y	Y	A
Diagnosis Related Group	Y	Y	Y	Y	Y	A
Drug Classifications	N	N	Y	Y	N	ALL
Drug Units	N	N	N	N	N	ALL
Drugs	Y	Y	Y	Y	Y	ALL
Events	Y	Y	Y	Y	Y	ALL
Fluids/Gases	Y	Y	Y	Y	Y	ALL
Insurers	N	N	Y	Y	N	A
Lab Units	N	N	Y	Y	N	ALL
Lab Tests	Y	Y	Y	Y	Y	ALL
Locations	N	N	Y	Y	N	H, I, P
Outcomes	Y	Y	Y	Y	Y	ALL
Outcome Locations	N	N	Y	Y	N	ALL
Patient History	Y	Y	Y*	Y	N	PRE

Table 4-1. List Manager's Site List Properties (continued)

Site List Name	Groups Sub-groups	Move	Add	Edit	Create Groups	Users
Patient System Conditions	Y	Y	Y	Y	N	PRE, P
Post-Op Acknowledgements	N	N	Y	Y	N	P
Post-Op Assessments	Y	Y	Y*	Y	Y	P
Post-Op Care	N	N	Y	Y	N	PRE
Post-Op Checks	Y	Y	Y*	Y	Y	P
Post-Op Discharge Evaluation	N	N	Y	Y	N	P
Post-Op Disch. Instruction	N	N	Y	Y	N	P
Post-Op Discharge Transfer	N	N	Y	Y	N	P
Post-Op Score	Y	Y	Y*	Y	Y	P
Pre-Procedure Status	N	N	Y	Y	N	H
Procedure Modifiers	N	N	Y	Y	N	A
Procedures (with AMA codes)	Y(S)	N	N	RV	N	A
Procedures (without AMA codes)	Y(S)	Y	Y	Y	Y	A
Process Verification	N	N	Y	Y	N	PRE
Routes	N	N	Y	Y	N	ALL
Staff	Y	Y	Y**	Y	Y	ALL
Vital Units	N	N	Y	Y	N	ALL
Vitals	Y	Y	Y	Y	Y	ALL

Refer to the key legend in the table below to interpret Table 4-1.

Table 4-2. Key Legend for Table 4-1

A = Admission	**I** = Intra-Op	**1** = Color	**(S)** = Subgroups exist
PRE = Pre-Op	**P** = Post-Op	**Y** = Yes	**RV** = Relative Value
H = Holding	**ALL** = PRE, H, I, P	**N** = No	**Y*** = Duplicates allowed among different groups **Y**** = Logon Name must be unique

Moving List Items Between Groups

Using any of the following procedures, you can move some list items between the groups or subgroups associated with a site list. For example, you could move an item in the "Anesthesia Charges" group to the "Hospital Charges" group, since these groups are associated with the same site list (Charges).

Prerequisite

The list items of the site list or its associated group must be displayed on the screen. Refer to "Viewing Site Lists, Groups and List Items" on page 4-2 for more information.

Procedure

To move a list item from one group (or subgroup) to another group (or subgroup) within a site list, follow the procedure for the input device you are using:

Moving Items Using a Touch Screen

1. Tap the list item in the List Control window so that it is highlighted and keep your finger on the screen.
2. With your finger on the list item, drag the list item to the Tree Control window and release it over another group in that same list where you want the item to be stored. A Move message appears (Figure 4-5 on page 4-9).
3. Click Yes or No.

Moving Items Using a Mouse

1. Click the list item's sheet-of-paper icon in the List Control window so that it is highlighted, meanwhile pressing down on the mouse button.
2. With your finger pressing on the mouse button, drag the list item to the Tree Control window and release it over the group or subgroup where you want the list item to be stored. A Move message appears (Figure 4-5 on page 4-9).
3. Click Yes or No.
4. To move the item back to its original group, repeat the above steps.

Moving Items Using a Keyboard

1. Using the ARROW keys, select the group or subgroup in the Tree Control window that contains the list item you want to move.
2. With the group or subgroup selected or highlighted in the Tree Control window, press the TAB key and the DOWN ARROW key. You can now scroll through the list items in the List Control window.
3. To toggle back and forth between the two windows, press the TAB key.

   Note: When the group is selected in the Tree Control section, it is highlighted in blue. When you press the TAB key, the group changes from blue to gray. If no item is highlighted in the List Control window, press the DOWN ARROW key; the first item in the list will be highlighted.
4. Select the item you want to move, and then type ALT, F. The File menu appears.
5. Type M to select Move from the File menu.

   Note: If the Move option on the File menu is not available, it means the list item cannot be moved.

   A Move dialog box appears (Figure 4-4). The list item to be moved appears in the Move field.

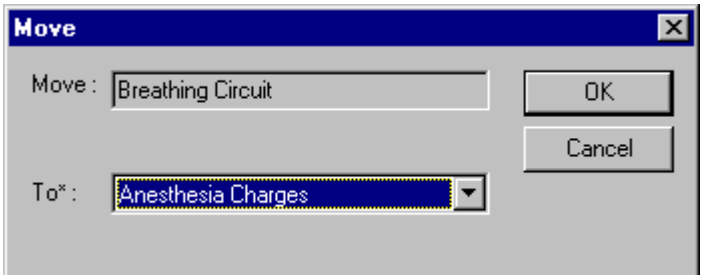

Figure 4-4. Move Dialog Box

6. Select the To: field and then press the arrow in the To* field to select a group or subgroup to which the item can be moved.

   Note: Dialog box fields followed by an asterisk (e.g., To*:) are required fields that must be completed before information can be saved in List Manager.

7. Press the ENTER key twice to move the list item, or press ESC to cancel.

   If you pressed the Enter key twice, a message similar to the following appears:

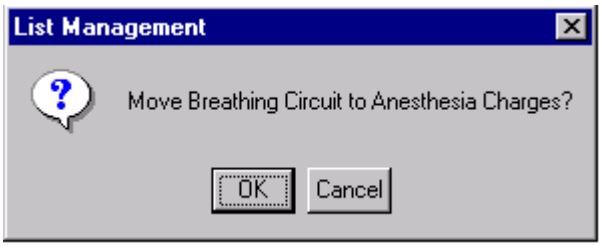

Figure 4-5. Move Confirmation Message

Adding List Items to a Site List or Its Associated Groups

You can create/add a new item to a site list using any of the following procedures. An item can be added to a site list with no groups, or to an associated group.

Note: There can be no duplicate list items in a site list except for Patient History (allergies and medications), Post-Op Assessments, Post-Op Checks, and Post-Op Score. For example, although you could *move* the drug ephedrine from the AlphaBeta Agonist group to another group, ephedrine cannot be a list item in both groups simultaneously. Also, when you add the same name to several groups in the Staff site list, the information can be identical in each Entry dialog box except for the Login Name field, which must be unique for each group.

Prerequisite

The list items of the site list or its associated group must be displayed on the screen. Refer to "Viewing Site Lists, Groups and List Items" on page 4-2 for more information.

Procedure

To add a new item to a site list, its groups or subgroups, follow the procedure for the input device you are using:

Adding Items Using a Touch Screen

1. Tap the site list in the Tree Control window (or an associated group or subgroup) so that its list items appear in the List Control window.
2. Tap the New button on the toolbar. The Add Entry dialog box appears for the site list to which you are adding an item (Figure 4-6 shows the Add Charge Entry dialog box).
3. Complete the fields in the dialog box for the new list item (i.e., Name, Charge Code, Active and Electronic Signature check boxes).
4. Do one of the following:
   - To add several new items to the list, press the Next >> button. Another blank Add Entry dialog box appears. Repeat step 3, then go to the next step.
   - If you are adding just one item, go to the next step.
5. When you are done adding items, select the OK button.

Note: You can exit without making changes by pressing the Cancel button.

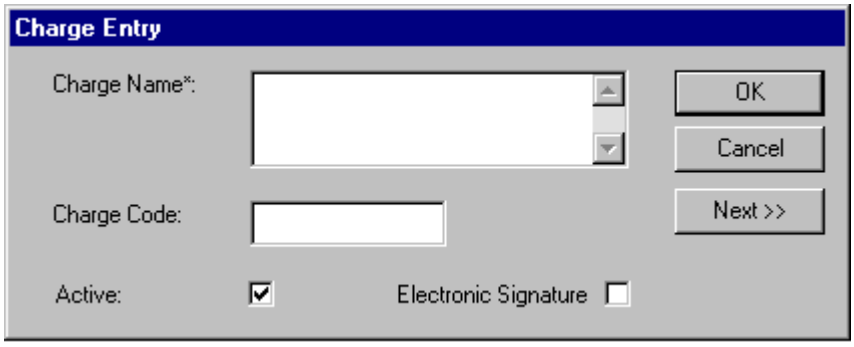

Figure 4-6. Add Charge Entry Dialog Box

Adding Items Using a Mouse

1. Click the site list in the Tree Control window (or an associated group or subgroup) so that its list items appear in the List Control window.
2. Click the New button on the toolbar. The Add Entry dialog box appears for the list to which you are adding an item (Figure 4-6 on page 4-10 shows the Add Charge Entry dialog box).
3. Complete the fields in the dialog box for the new list item (i.e., Name, Charge Code, Active and Electronic Signature check boxes).
4. Do one of the following:
   - To add several new items to the list, click the Next >> button. Another blank Add Entry dialog box appears. Repeat step 3, then go to the next step.
   - If you are adding just one item, go to the next step.
5. When you are done adding items, select the OK button.

Note: You can exit without making changes by clicking the Cancel button.

Adding Items Using the Keyboard

1. Using the Arrow keys, select the site list in the Tree Control window (or an associated group or subgroup) so that its list items appear in the List Control window.
2. Type ALT, F, N to select New on the File menu. The Add Entry dialog box appears for the list to which you are adding an item (Figure 4-6 on page 4-10 shows the Add Charge Entry dialog box).
3. Complete the fields in the dialog box for the new list item (i.e., Name, Charge Code, Active and Electronic Signature check boxes).
4. Do one of the following:
   - To add several new items to the list, select the Next >> button. Another blank Add Entry dialog box appears. Repeat step 3, then go to the next step.
   - If you are adding just one item, go to the next step.
5. When you are done adding items, select the OK button.

Note: You can exit without making changes by pressing ESC.

Creating New Groups

Although you cannot create a new site list (i.e., the items that appear in the Tree Control window marked by a green book icon), you can create new groups for many of the existing site lists. Groups are marked by a blue book icon when you select site lists in the Tree Control window.

Generally speaking, you can add new groups to most site lists that have existing groups associated with them. Refer to Table 4-1 on page 4-6 for a complete list of site lists and their configuration capabilities.

Prerequisite

The site list's associated groups must be displayed in the List Control window. Refer to "Site Lists with Groups" on page 4-3 for more information.

Procedure

To add a new group to a site list, follow the procedure for the input device you are using:

Creating Groups Using a Touch Screen

1. Tap the site list (green book icons) in the Tree Control window so that its groups (blue book icons) appear in the List Control window.
2. Tap the New button on the toolbar. The Add Group Entry dialog box appears for the site list to which you are adding a group (Figure 4-7 on page 4-12 shows the Add Drug Group Entry dialog box).
3. Type the name of the new group in the Group field, and then select the workstation type(s) that you want granted access to this group (i.e., Pre-Op, Holding, Intra-Op and Post-Op).

   Note: The Active check box must be checked for this group to be accessed by any user.
4. Select the OK button to create the new group.

   Note: You can exit without making changes by pressing the Cancel button.

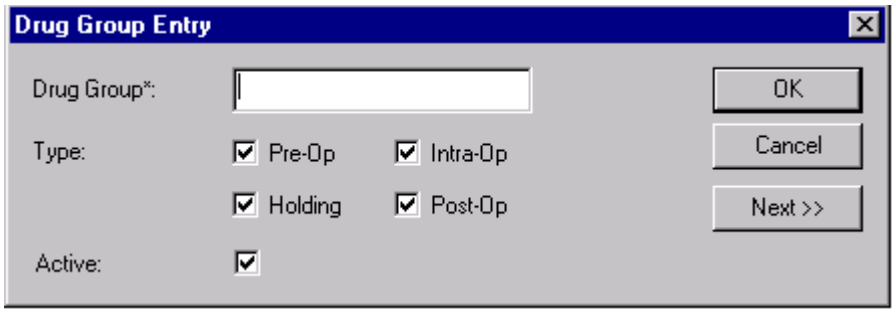

Figure 4-7. Add Drug Group Entry Dialog Box

Creating Groups Using a Mouse

1. Click the site list in the Tree Control window so that its groups appear in the List Control window.
2. Click the New button on the toolbar. The Add Group Entry dialog box appears for the site list to which you are adding a group (Figure 4-7 shows the Add Drug Group Entry dialog box).
3. Type the name of the new group in the Group field, and then select the workstation type(s) that you want granted access to this group (i.e., Pre-Op, Holding, Intra-Op and Post-Op), if applicable.

   Note: The Active check box must be checked for this group to be accessed by any user.
4. Select the OK button to create the new group.

   Note: You can exit without making changes by clicking the Cancel button.

Creating Groups Using the Keyboard

1. Using the Arrow keys, select the site list in the Tree Control window so that its groups appear in the List Control window.
2. Type ALT, F, N to select New on the File menu. The Add Group Entry dialog box appears for the group to which you are adding an item (Figure 4-7 shows the Add Drug Group Entry dialog box).
3. Type the name of the new group in the Group field, and then select the workstation type(s) that you want granted access to this group (i.e., Pre-Op, Holding, Intra-Op and Post-Op), if applicable.

   Note: The Active check box must be checked for this group to be accessed by any user.
4. Select the OK button to create the new group.

   Note: You can exit without making changes by pressing the Cancel button or ESC.

Editing Existing Groups and List Items

Editing allows you to make the following kinds of changes:

- You can change the names, codes and other properties of existing list items in a site list, or to items in its associated groups or subgroups.
- You can change the names, codes and other properties of existing groups, and determine which workstations can access a particular group.
- You can routinely make list items or groups active or inactive, and require or waive electronic signatures as a condition of access to them.

After you change the item or group's information in the Entry dialog box, you save it. The changed and saved data will apply to that list item or group in each Saturn application program.

Prerequisite

The list items of the site list or its associated group must be displayed on the screen. Refer to "Viewing Site Lists, Groups and List Items" on page 4-2 for more information.

Procedure

To edit a site list, subgroup or list item, follow the procedure for the input device you are using:

Editing Items Using a Touch Screen

1. Tap the list item in the Tree Control window so that it is selected.
2. Tap the Open button on the toolbar. The Entry dialog box appears for the list item which you are editing (Figure 4-8 shows an Outcome Entry dialog box).

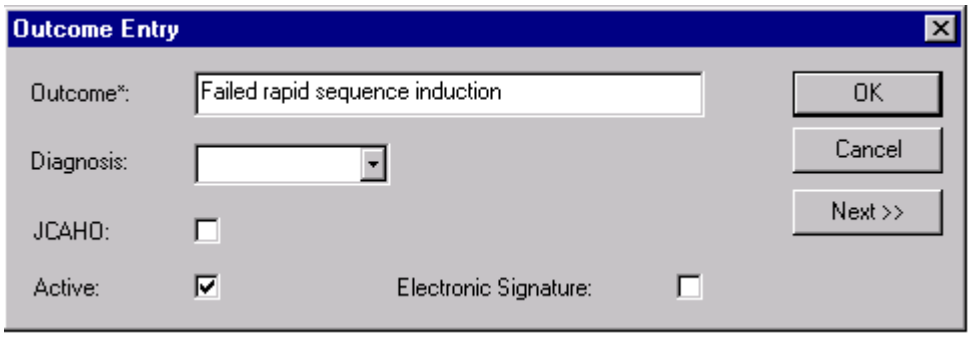

Figure 4-8. Editing an Outcome Entry Dialog Box

3. Change the fields in the dialog box for the list item (i.e., Outcome, Diagnosis, JCAHO, Active and Electronic Signature check boxes).
4. Do one of the following:
   - To edit several items in the list, select the Next >> button. The next item's Add Entry dialog box appears. Repeat step 3, then go to the next step.
   - If you are adding just one item, go to the next step.
5. When you are done changing list items, select the OK button.

   Note: You can exit without making changes by selecting the Cancel button.

Editing Items Using a Mouse

1. Double-click the group or list item in the List Control window that you want to edit.
2. The Entry dialog box appears for the group or list item which you are editing (Figure 4-8 on page 4-14 shows an Outcome Entry dialog box).
3. Change the fields in the dialog box for the list item or group (i.e., Outcome, Diagnosis, JCAHO, Active and Electronic Signature check boxes).
4. Do one of the following:
   - To edit several items in the list, press the Next >> button. The next item's Add Entry dialog box appears. Repeat step 3, then go to the next step.
   - If you are adding just one item, go to the next step.
5. When you are done changing items, select the OK button.

   Note: You can exit without making changes by clicking the Cancel button.

Editing Items Using the Keyboard

1. Using the ARROW keys, select the site list or group in the Tree Control window so that its groups or list items appear in the List Control window.
2. Select a group or list item in the List Control window by pressing the TAB key and the DOWN ARROW key.

   Note: To toggle back and forth between the two windows, press the TAB key. When the group is selected in the Tree Control section, it is highlighted in blue. When you press the TAB key, the group changes from blue to gray. If no item is highlighted in the List Control window, press the DOWN ARROW key; the first item in the list will be highlighted.

3. Type ALT, F, O to select Open on the File menu. The Entry dialog box appears for the group or list item you selected (Figure 4-8 on page 4-14 shows an Outcome Entry dialog box).
4. Change the fields in the dialog box for the group or list item (i.e., Outcome, Diagnosis, JCAHO, Active and Electronic Signature check boxes).
5. Do one of the following:
   - To edit several items in the list, select the Next >> button. The next item's Add Entry dialog box appears. Repeat step 3, then go to the next step.
   - If you are adding just one item, go to the next step.
6. When you are done changing groups or list items, select the OK button.

Note: You can exit without making changes by pressing ESC.

Important: The following warning message appears when you edit lists, groups and list items (Figure 4-9):

List Management
WARNING: References to IV Fluids per NICU record will be changed to IV Fluids per NICS record in all Saturn cases.
Are you sure you want to continue?
Yes
No

Figure 4-9. Example Warning Message

Activating and Deactivating Groups and List Items

Every Entry dialog box associated with a group or list item has an "Active" check box. You can select this check box to make it available to users who are configured to access that particular group or list item. However, you can clear it to make the group or list item inactive and thus unavailable to users.

Deactivating this check box prevents the group or list item from being used in any of the Saturn application programs; activating it provides access to the group or list item in all Saturn programs, but also depends on the user's security level.

Prerequisite

The list item you want to activate or deactivate must be displayed in the List Control window. Refer to "Viewing Site Lists, Groups and List Items" on page 4-2 for more information.

Procedure for Using a Touch Screen

To activate or deactivate groups and list items, follow this procedure:

1. Tap the group or list item in the List Control window.
2. In the Entry dialog box, select or clear the Active check box by tapping it

-Or-

Tap the check box next to the list item in the Tree Control window to select or clear it.

Procedure for Using a Mouse

1. Click the group or list item in the List Control window.
2. In the Entry dialog box, select or clear the Active check box.

-Or-

Click the check box next to the list item in the Tree Control window to select or clear it.

Procedure for Using a Keyboard

1. With the UP and DOWN ARROW keys, select the list item in the List Control Window.
2. Type Alt, F, O. The Entry dialog box appears.
3. In the Entry dialog box, use the Tab key to select the Active check box, then press the spacebar to select or clear it.

Saving a List

Once you create a new list or edit an existing list, save it so that it can be used by Saturn.

Prerequisite You must have already created a list.

Procedure To save a list, follow the procedure for the input device you are using:

Touch Screen	Tap the Save icon on the toolbar.
Mouse	Click the Save icon on the toolbar.
Keyboard	Type ALT,F to select the File menu, then type S to select Save.

Note: You can also save a list by selecting Save from the File menu using the touch screen or mouse.

Entry Dialog Boxes

The following is a complete list of Entry dialog boxes used to change, edit or add groups and list items to site lists. Each description also provides the location of where these list items are selected in the Recorder program (i.e., Systems page of the Pre-Op section, etc.). Checking the Active field in the dialog boxes enables the other Saturn applications users to access the new or edited group or list item.

Note: Fields marked with an asterisk (*) are required data fields. You must enter something in this field in order to save the new information.

To access a dialog box for a *list item* (i.e., Charge), the list item must be displayed in the List Control window. To access a dialog box for a *group* (i.e., Charge Group), the group list must be displayed in the List Control window. (Sometimes a second dialog box for a site list is called a *parameter* entry dialog box; it is another name for "group.") Refer to "Viewing Site Lists, Groups and List Items" on page 4-2 for more information.

Table 4-2 on page 4-7 outlines the unique traits of several site lists.

Admission Type

The Admission Type Entry dialog box lets you create and edit admission list items. These items appear on the Demographics page of the Admission section.

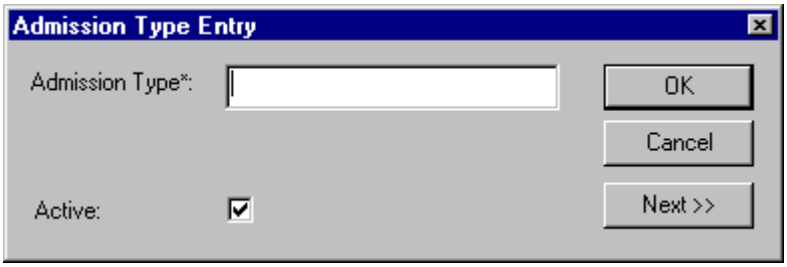

Figure 4-10. Admission Type Entry Dialog Box

Anesthesia Type

The Anesthesia Type Entry dialog box lets you create and edit anesthesia list items. These items appear on the Surgery & Anes. page of the Admission section.

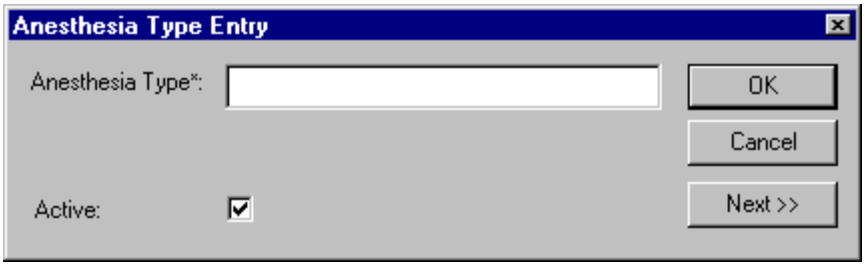

Figure 4-11. Anesthesia Type Entry Dialog Box

ASA/Physical Status

The ASA/Physical Status Entry dialog box lets you create or edit ASA physical status indicators. These items are selected on the Plan page of the Pre-Op section and are displayed as read-only data in the Holding Chart.

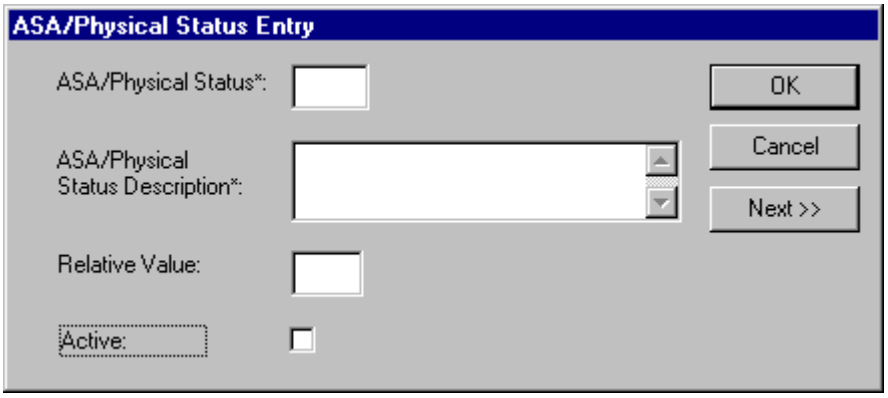

Figure 4-12. ASA/Physical Status Entry Dialog Box

Automatic Data

The Automatic Data Entry dialog box lets you edit only the Electronic Signature check box, and the colors to be used in representing automatic data items that appear on the Recorder program Chart pages of the Holding, Intra-Op, and Post-Op sections.

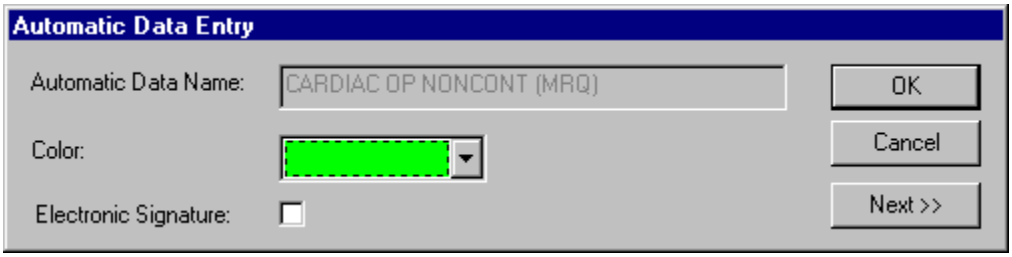

Figure 4-13. Automatic Data Entry Dialog Box

Charge

The Charge Entry dialog box lets you create chargeable list items and assign them codes. These items appear in the Add Charge dialog box when you add or edit an outcome.

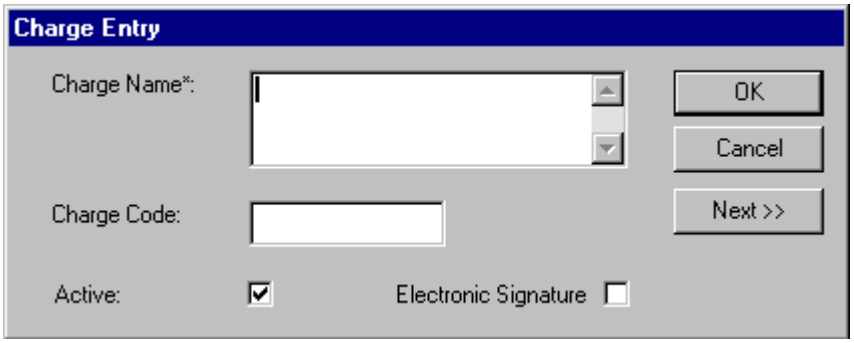

Figure 4-14. Charge Entry Dialog Box

Charge Group

The Charge Group Entry dialog box lets you create new groups of chargeable list items that are associated with the Charges site list.

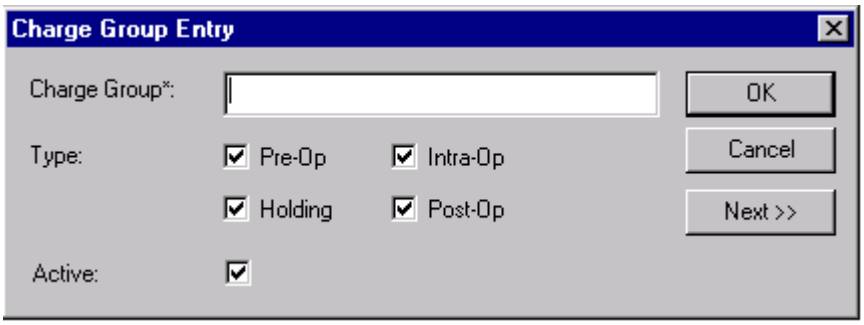

Figure 4-15. Charge Group Entry Dialog Box

Diagnosis

The Diagnosis Entry dialog box lets you create and edit diagnosis codes and their descriptions. These items appear on the Surgery & Anes. page of the Admission section.

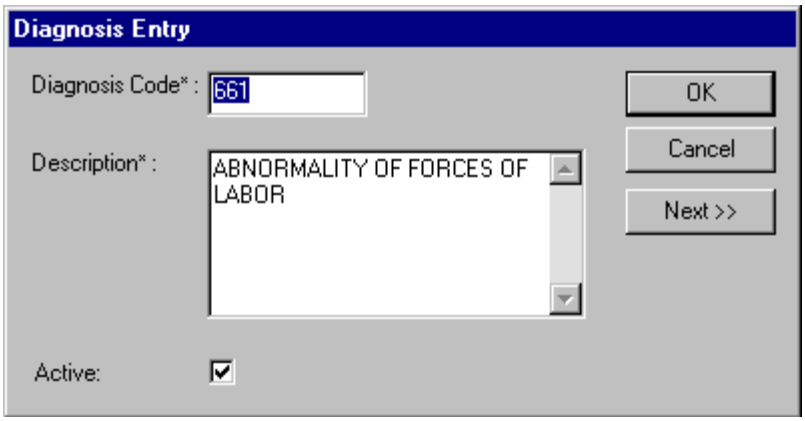

Figure 4-16. DRG (Diagnosis Entry Dialog Box)

Diagnosis Group

The Diagnosis Group Entry dialog box lets you create new groups of diagnosis codes and their descriptions associated with the Diagnosis site list.

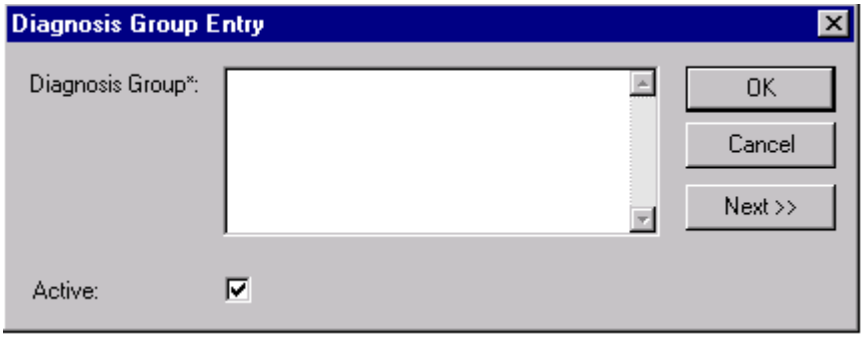

Figure 4-17. Diagnosis Entry Dialog Box

Diagnosis Related Group

The Diagnosis Related Group dialog box lets you create new groups of diagnosis related group codes and their descriptions, and assign each group a DRG code number. These items appear on the Surgery & Anes. page of the Admission section.

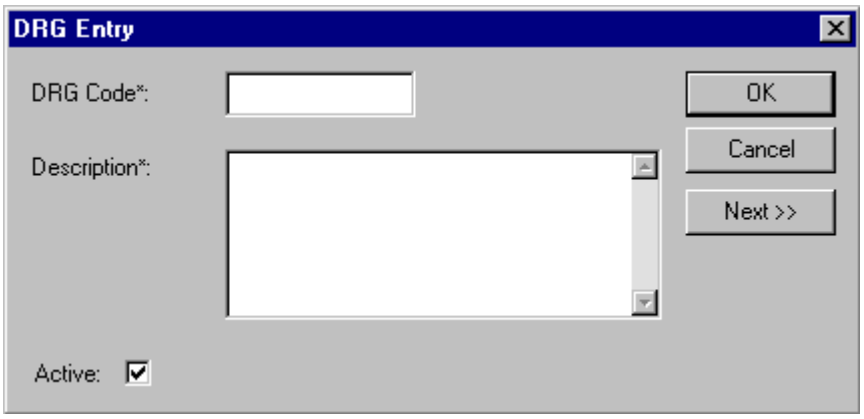

Figure 4-18. Diagnosis Related Group Dialog Box

Drug Classification

The Drug Classification Entry dialog box lets you create drug classifications that are used in the Drugs Entry dialog box (see Figure 4-20). Although drug classification reports cannot be generated using Report Manager, you can generate a report from your own database. For example, if you want a list of all the drugs that fall into the classification of “muscle relaxant,” you can generate that report from the database.

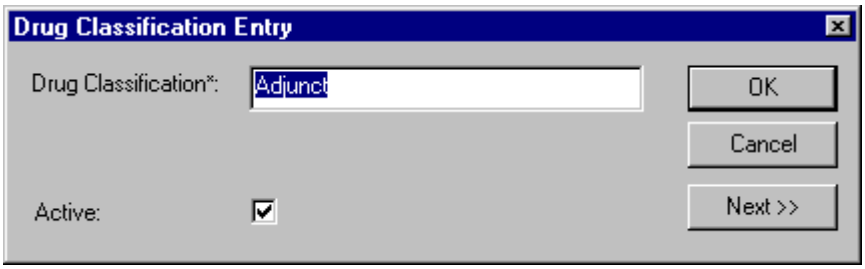

Figure 4-19. Drug Classification Entry Dialog Box

Drugs

The Drug Entry dialog box lets you create drug list items in the various groups associated with this site list. These items appear in the Add Drug dialog box when you add or edit a drug.

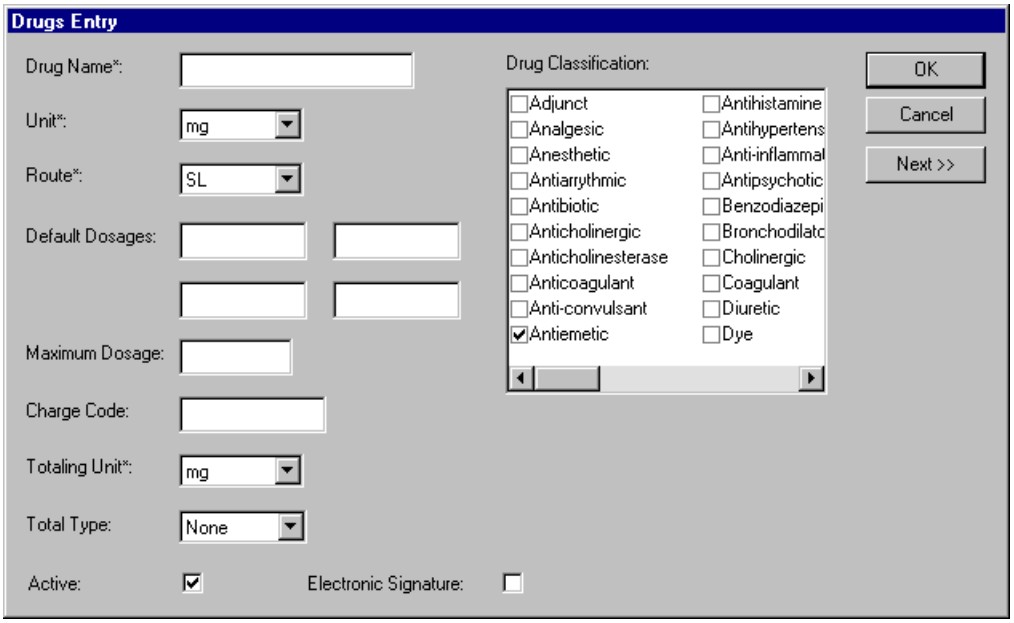

Figure 4-20. Drugs Entry Dialog Box

Drug Group

The Drug Group Entry dialog box lets you create new groups associated with the Drugs site list.

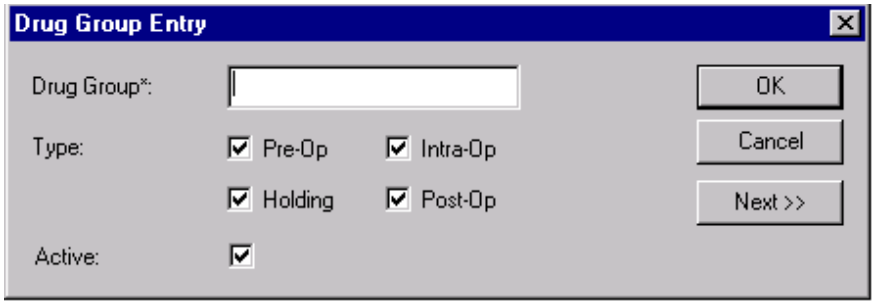

Figure 4-21. Drugs Group Entry Dialog Box

Events

The Event Entry dialog box lets you create and edit event list items These items appear in the Add Event dialog box when you add or edit an event.

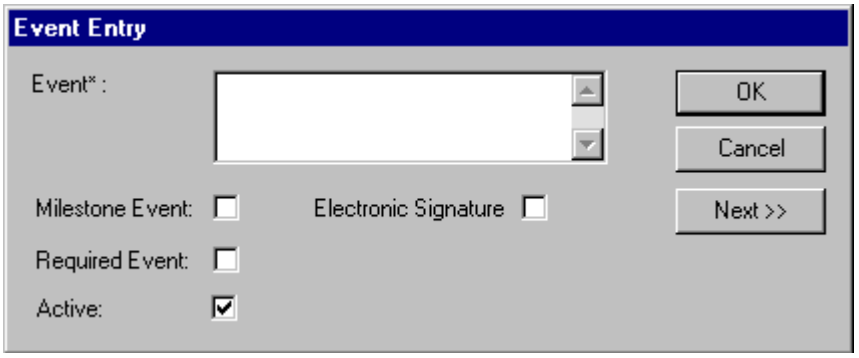

Figure 4-22. Event Entry Dialog Box

Note: The following Start/Stop Times events cannot be edited or deactivated:

- End of Anesthesia Care
- End of Printed Anesthesia Record
- End of Printed Post-Op Record
- End of Printed Pre-Op Record
- End of Surgery
- Scheduled Case End
- Scheduled Case Start
- Start of Anesthesia Care
- Start of Printed Anesthesia Record
- Start of Printed Post-Op Record
- Start of Printed Pre-Op Record
- Start of Surgery

Event Group

The Event Group Entry dialog box lets you create new groups associated with the Events site list.

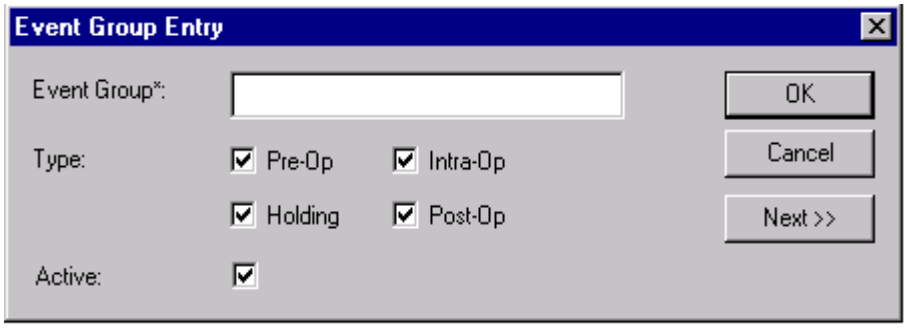

Figure 4-23. Event Entry Dialog Box

Fluid/Gas

The Fluid/Gas Entry dialog box lets you create and edit fluid/gas list items. These items appear in the Add Fluid/Gas dialog box when you add or edit a fluid or gas.

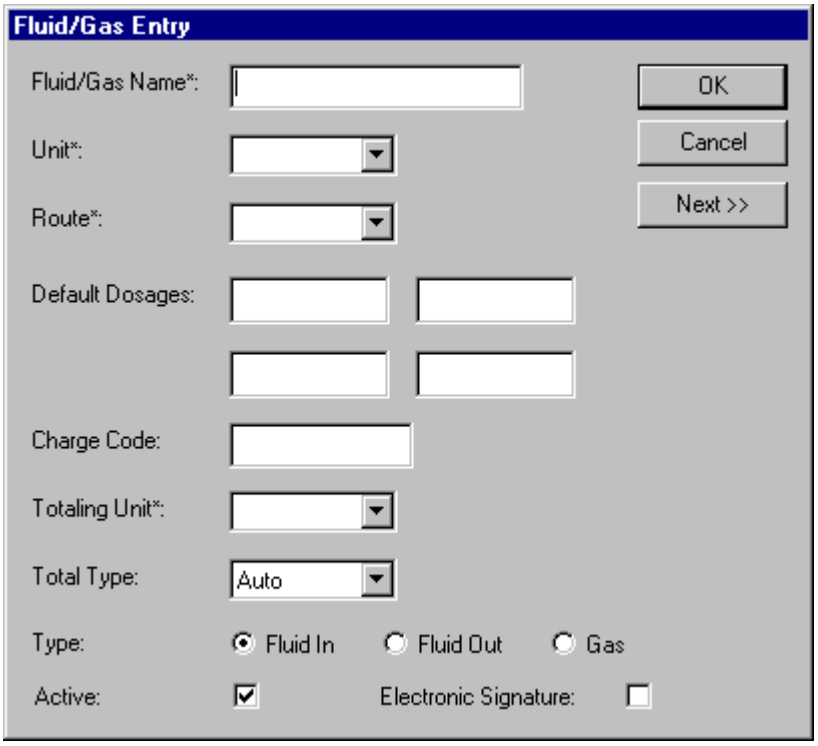

Figure 4-24. Fluid/Gas Entry Dialog Box

Fluid/Gas Group

The Fluid/Gas Group Entry dialog box lets you create new groups associated with the Fluids/Gases site list.

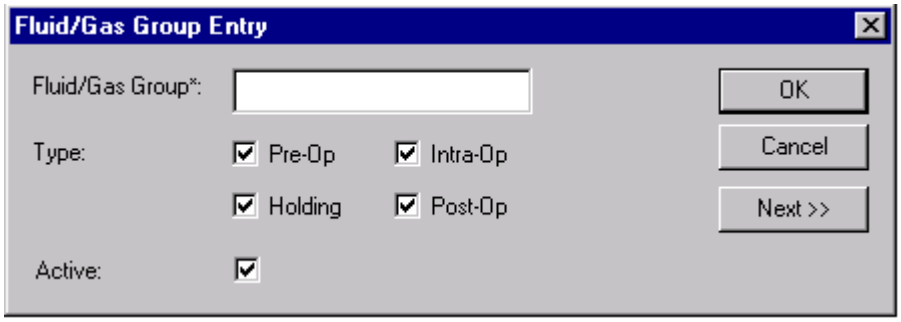

Figure 4-25. Fluid/Gas Group Entry Dialog Box

Insurer

The Insurer Entry dialog box lets you create and edit insurer list items. These items appear on the Demographics page of the Admission section.

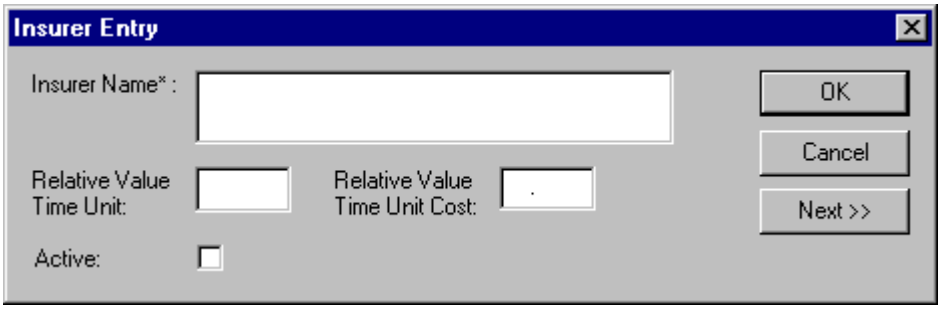

Figure 4-26. Insurer Entry Dialog Box

Lab Units

The Lab Unit Entry dialog box lets you create and edit lab result value units to be used in the Lab Test Entry dialog box (see Figure 4-28). These items appear when selecting labs.

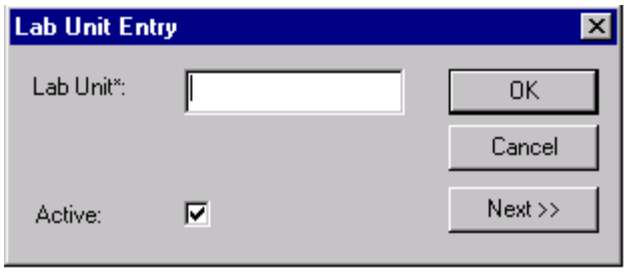

Figure 4-27. Lab Unit Entry Dialog Box

Lab Test

The Lab Test Entry dialog box lets you create and edit lab test list items. These items appear in the Add Lab dialog box when you add or edit a lab.

Figure 4-28. Lab Test Entry Dialog Box

Lab Group

The Lab Group Entry dialog box lets you create new groups associated with the Lab Test site list.

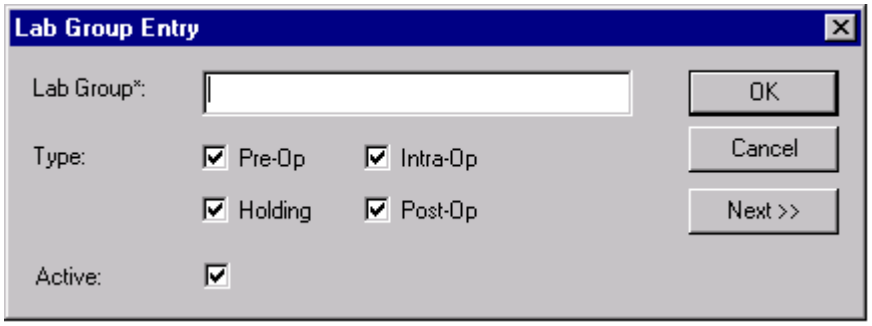

Figure 4-29. Lab Group Entry Dialog Box

Locations

The Location Entry dialog box lets you enter and update the names of the various patient locations in the hospital. These items appear on the Chart page of the Holding and Post-Op sections.

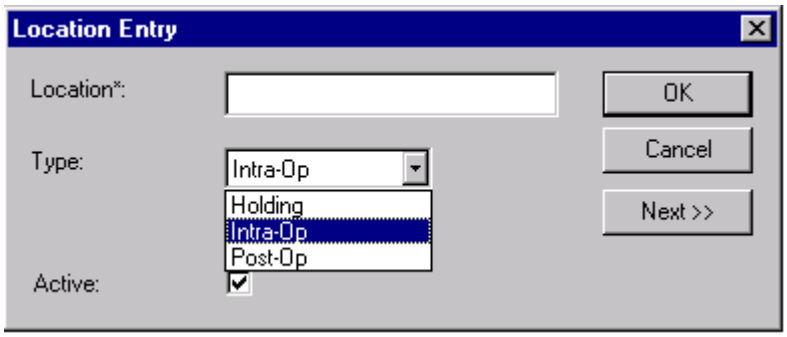

Figure 4-30. Location Entry Dialog Box

Outcomes

The Outcome Entry dialog box lets you create and edit outcome list items. These items appear in the Add Outcome dialog box when you add or edit an outcome.

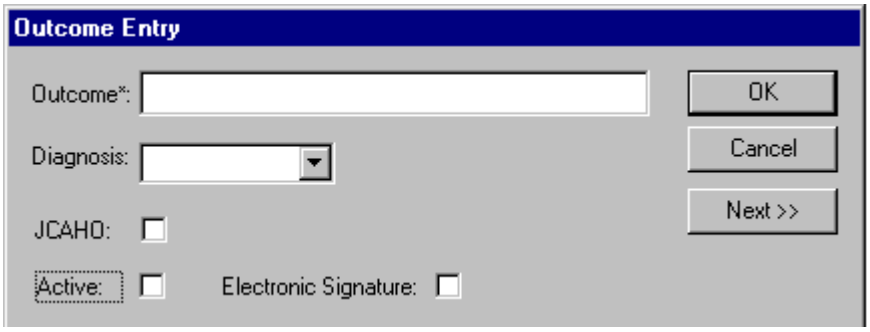

Figure 4-31. Outcome Entry Dialog Box

Outcome Group

The Outcome Group Entry dialog box lets you create a new group associated with the Outcomes site list.

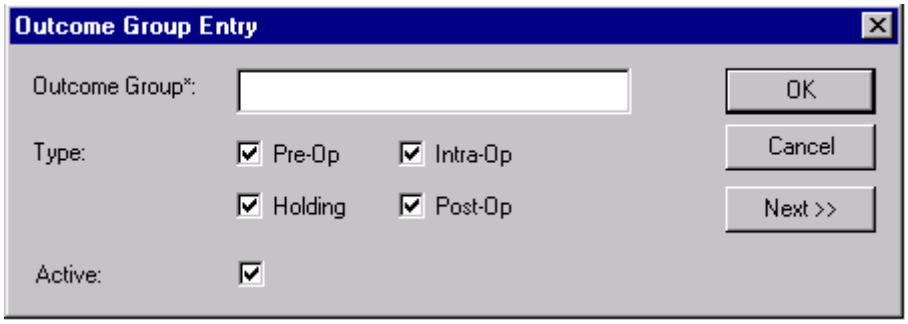

Figure 4-32. Outcome Group Entry Dialog Box

Outcome Locations

The Outcome Location Entry dialog box lets you create and edit outcome location list items. These items appear in the Location list in the Outcome Entry dialog box.

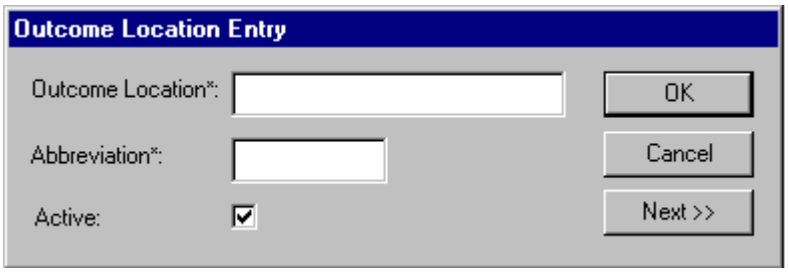

Figure 4-33. Outcome Location Entry Dialog Box

Patient History

The Patient History Entry dialog box lets you enter and edit preoperative patient history data. These items appear on the History page of the Pre-Op section.

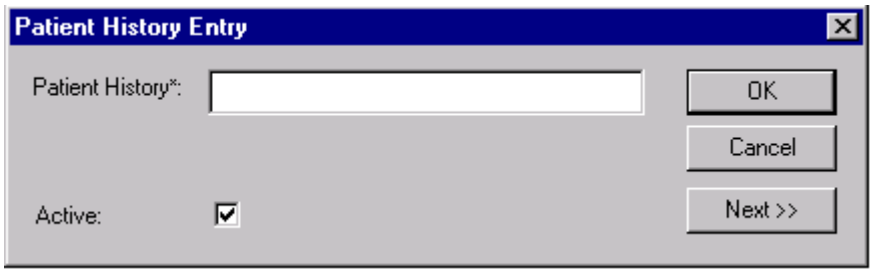

Figure 4-34. Patient History Entry Dialog Box

Post-Op Acknowledge-ments

The Post-Op Acknowledgement Entry dialog box lets you create and edit postoperative acknowledgement list items. These items appear on the Chart page of the Post-Op section.

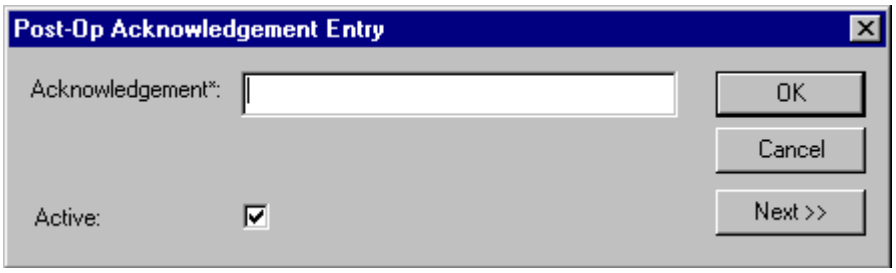

Figure 4-35. Post-Op Acknowledgement Entry Dialog Box

Post-Op Assessment Status

The Post-Op Assessment Status Entry dialog box lets you create new postoperative physical assessments. These items appear in the individual Assessment dialog boxes on the Assess page of the Post-Op section.

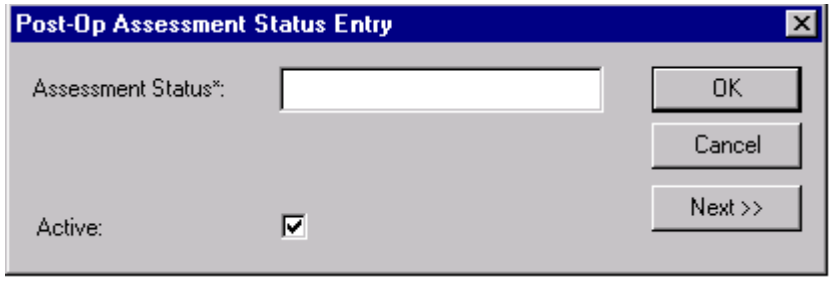

Figure 4-36. Pot-Op Assessment Status Entry Dialog Box

Post-Op Assessment Parameter

The Post-Op Assessment Parameter Entry dialog box lets you create a new group of postoperative physical assessments. These groups appear on the Assess page of the Post-Op section.

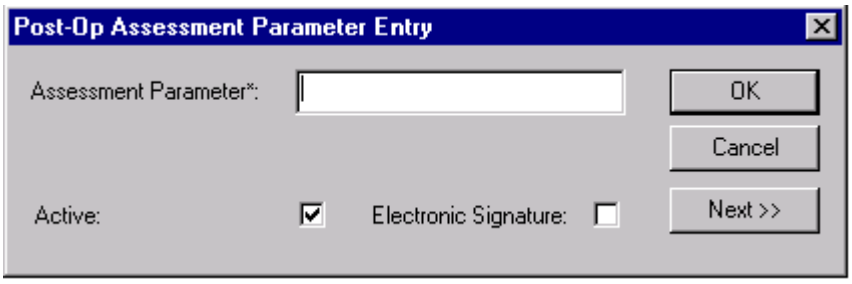

Figure 4-37. Post-Op Assessment Parameter Entry Dialog Box

Post-Op Score Status

The Post-Op Score Status Entry dialog box lets you create and edit postoperative recovery scoring measures. These items appear in the individual Score dialog boxes on the Score page of the Post-Op section.

Note: The default setting for the Score page is the Aldrete scoring method. You can configure other parameters and their associated score statuses by selecting New from the File menu after you create a new parameter (Figure 4-39).

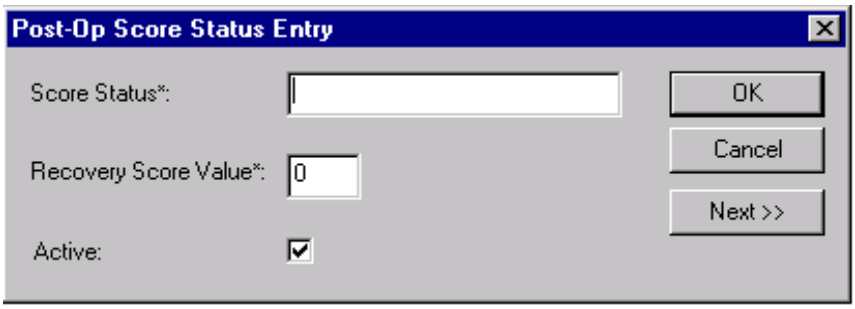

Figure 4-38. Post-Op Score Status Entry Dialog Box

Post-Op Score Parameter

The Post-Op Score Parameter Entry dialog box lets you create a new group of postoperative recovery scoring measures. These groups appear on the Score page of the Post-Op section.

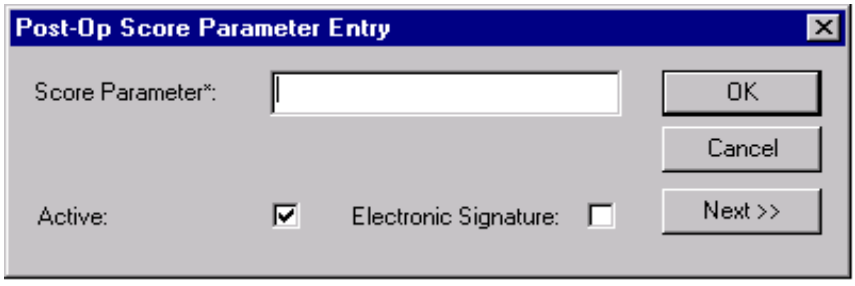

Figure 4-39. Post-Op Score Parameter Entry Dialog Box

Post-Op Discharge Evaluation

The Post-Op Discharge Evaluation Entry dialog box lets you create and edit postoperative discharge evaluation list items. These items appear on the Discharge page of the Post-Op section.

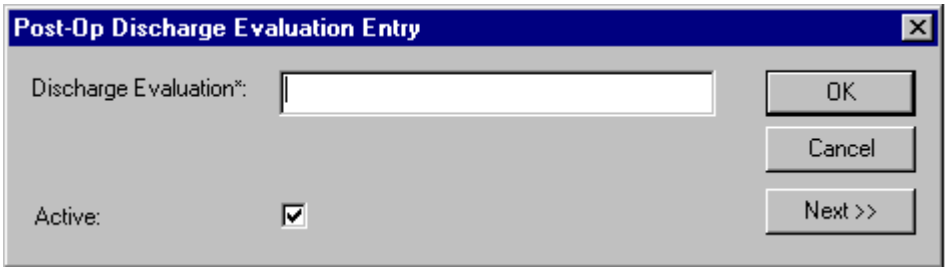

Figure 4-40. Post-Op Discharge Evaluation Entry Dialog Box

Post-Op Care

The Post-Op Care dialog box lets you create and edit postoperative care locations. These items appear on the Plan page of the *Pre-Op* section.

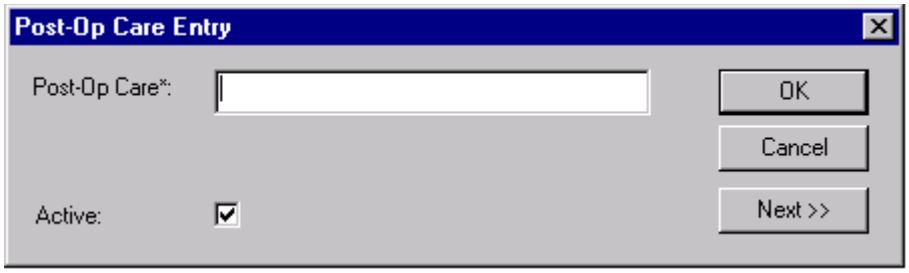

Figure 4-41. Post-Op Care Dialog box

Post-Op Checks Status

The Post-Op Checks Status dialog box lets you create specific recovery assessment list items. These items appear in the individual Checks dialog boxes on the Checks page of the Post-Op section.

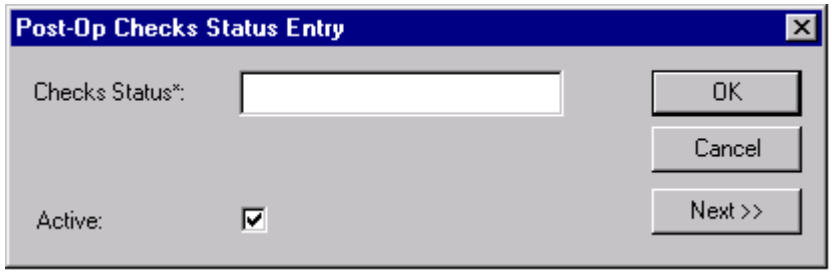

Figure 4-42. Post-Op Checks Status Dialog Box

Post-Op Checks Parameter

The Post-Op Checks Parameter dialog box lets you create a new group associated with the Post-Op Checks site list. These groups appear on the Checks page of the Post-Op section.

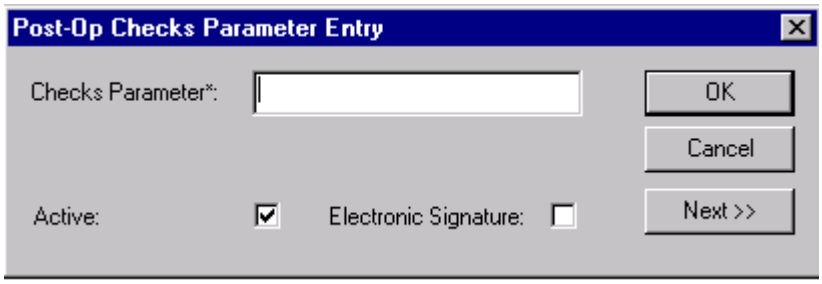

Figure 4-43. Post-Op Checks Parameter Dialog Box

Post-Op Discharge Instruction

The Post-Op Discharge Instruction Entry dialog box lets you create and edit postoperative discharge instruction list items. These items appear on the Discharge page of the Post-Op section.

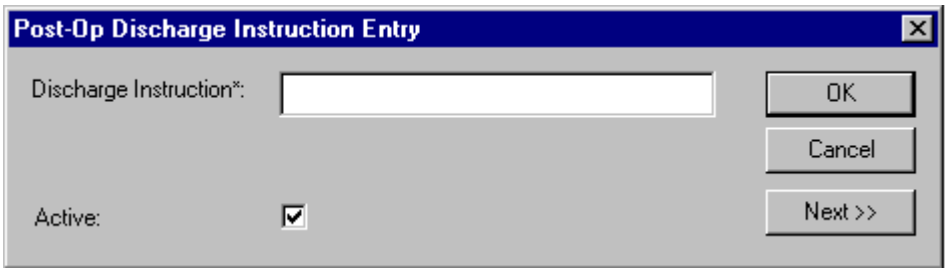

Figure 4-44. Post-Op Discharge Instruction Entry Dialog Box

Post-Op Discharge Transfer

The Post-Op Discharge Transfer Entry dialog box lets you create and edit postoperative discharge transfer list items. These items appear on the Discharge page of the Post-Op section.

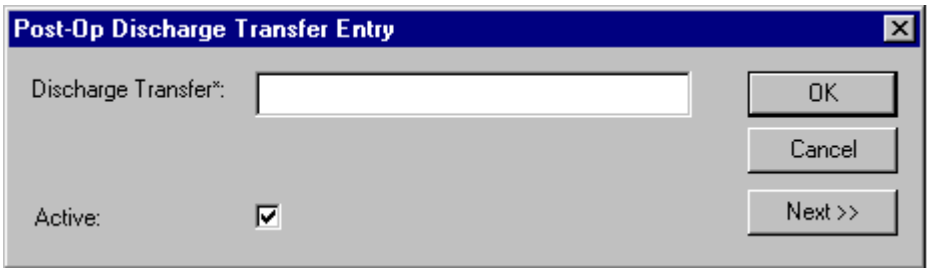

Figure 4-45. Post-Op Discharge Transfer Entry Dialog Box

Patient System Conditions

The Patient Systems Condition Entry dialog box lets you create and edit preoperative and postoperative patient systems condition list items. These items appear on the Systems pages of the Pre-Op and Post-Op sections.

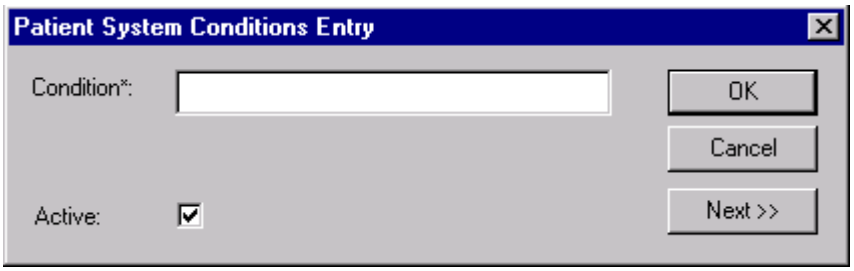

Figure 4-46. Post-Op Patient Systems Condition Entry Dialog Box

Pre-Procedure Status

The Pre-Procedure Status dialog box lets you create or edit list items regarding the patient's pre-procedure status. These items appear on the Chart page of the Holding section.

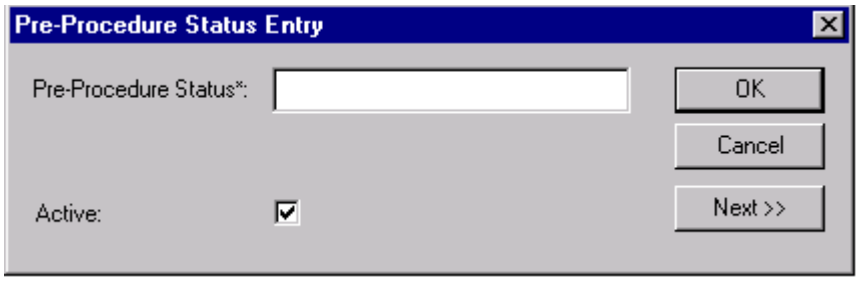

Figure 4-47. Pre-Procedure Status Entry Dialog Box

Procedure

The Procedure Entry dialog box lets you edit only the Relative Value of a procedure. Relative Value information does not appear elsewhere in the Saturn graphical user interface.

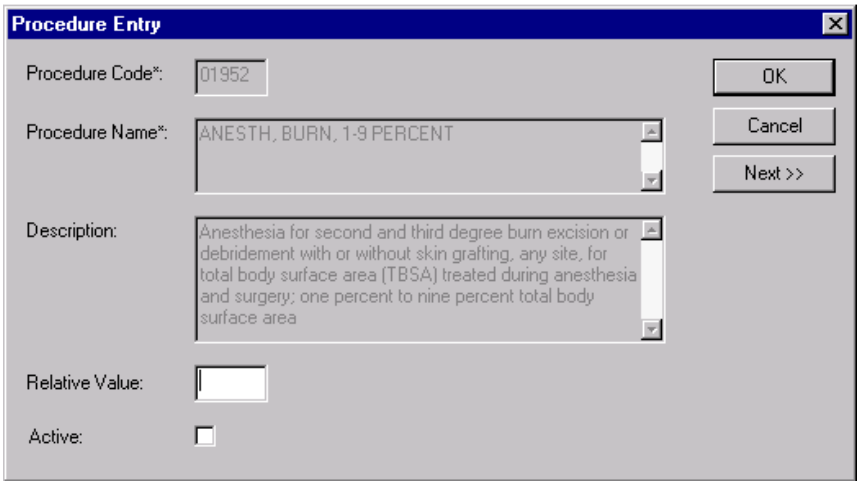
Procedure Entry
Procedure Code*:
01952
OK
Procedure Name*:
ANESTH, BURN, 1-9 PERCENT
Cancel
Next >>
Description:
Anesthesia for second and third degree burn excision or debridement with or without skin grafting, any site, for total body surface area (TBSA) treated during anesthesia and surgery; one percent to nine percent total body surface area
Relative Value:
Active:

Figure 4-48. Procedure Entry Dialog Box

Procedure Modifier

The Procedure Modifier Entry dialog box lets you create and edit procedure modifier codes. These items appear in the Enter Procedure dialog box when selecting procedures on the Surgery & Anes. page of the Admission section.

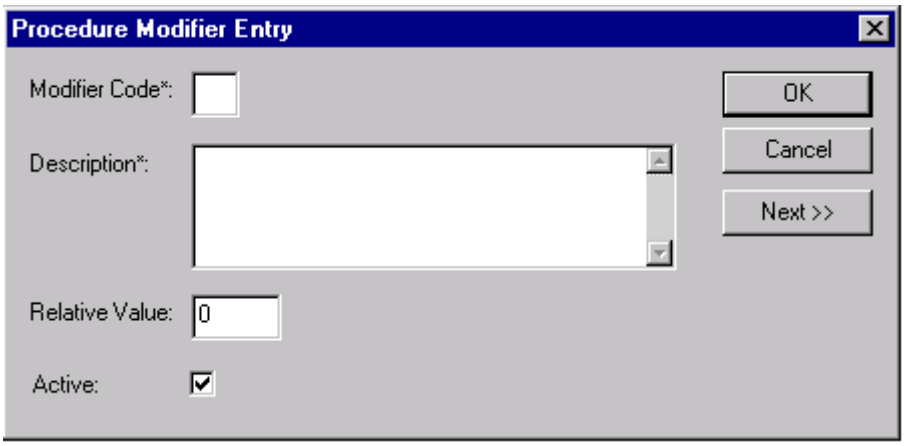

Figure 4-49. Procedure Modifier Entry Dialog Box

Process Verification

The Process Verification dialog box lets you create and edit the required steps prior to a patient's surgery. These items appear on the Plan page of the Pre-Op section.

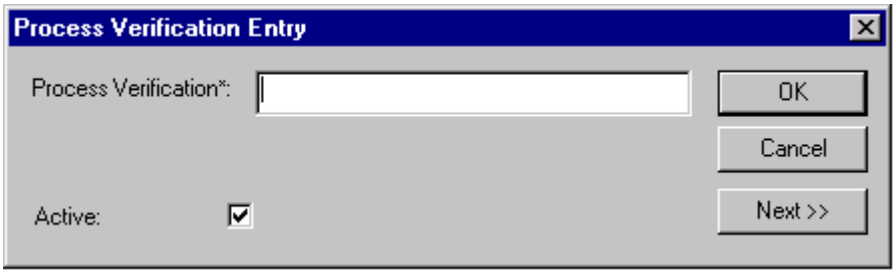

Figure 4-50. Process Verification Entry Dialog Box

Routes

The Route Entry dialog box lets you create and edit the methods of administering drugs and fluids/gases. These items appear in the Drug Entry and Fluid/Gas Entry dialog boxes when selecting drugs and fluids/gases.

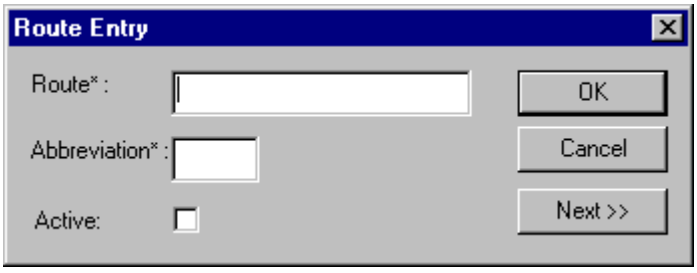

Figure 4-51. Route Entry Dialog Box

Staff

The Staff Entry dialog box lets you create and edit staff names and determine access rights (i.e., security levels). Staff lists appear on the Surgery & Anes. page of the Admission section; the Plan page of the Pre-Op section; the Chart in the Holding section; and the Chart and Discharge page of the Post-Op section.

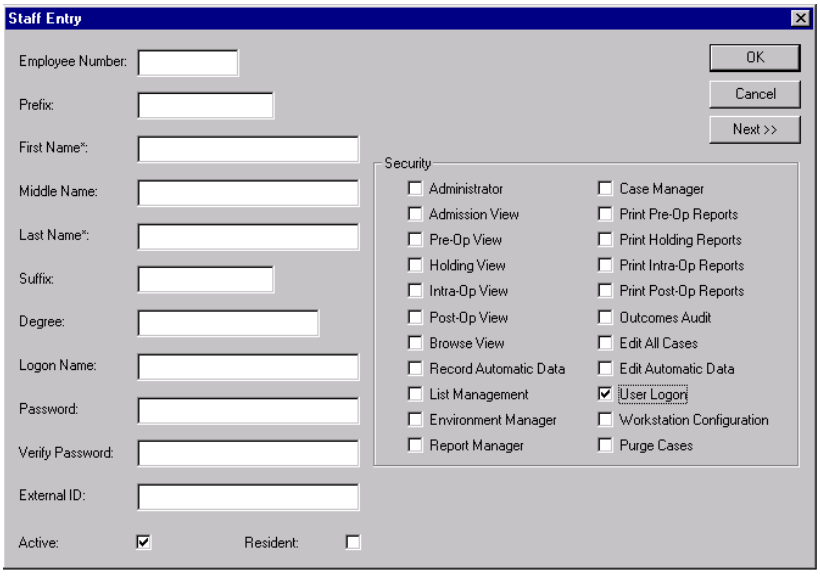

Figure 4-52. Staff Entry Dialog Box

Staff Group

The Staff Group Entry dialog box lets you create and edit a new staff group associated with the Staff site list.

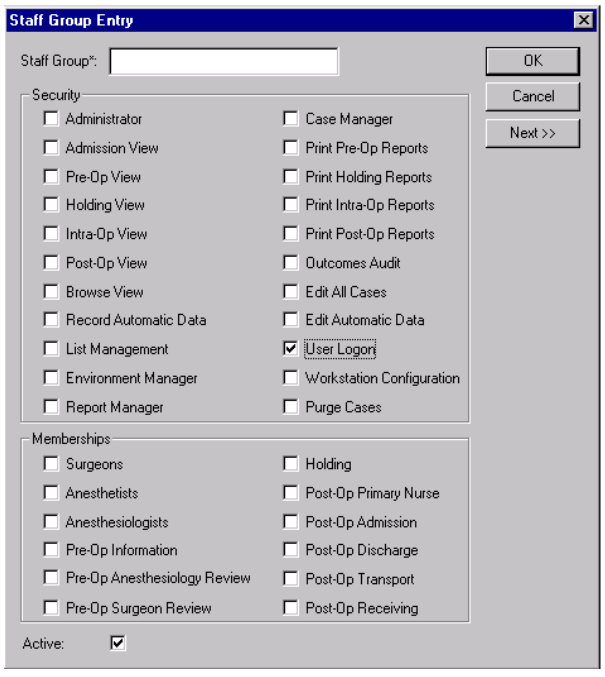

Figure 4-53. Staff Group Entry Dialog Box

Vital Units

The Vital Unit Entry dialog box lets you create and edit vital unit list items. These items appear in the Vital Entry dialog box (Figure 4-54) when you add or edit vitals.

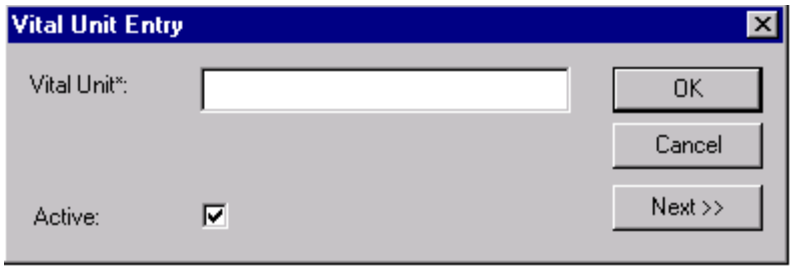

Figure 4-54. Vital Unit Entry Dialog Box

Vitals

The Vital Entry dialog box lets you create and edit vital items. These items appear in the Add Vital dialog box when you add or edit a vital.

Figure 4-55. Vital Entry Dialog Box

Vital Group

The Vital Group Entry dialog box lets you create a new group associated with the Vitals site list.

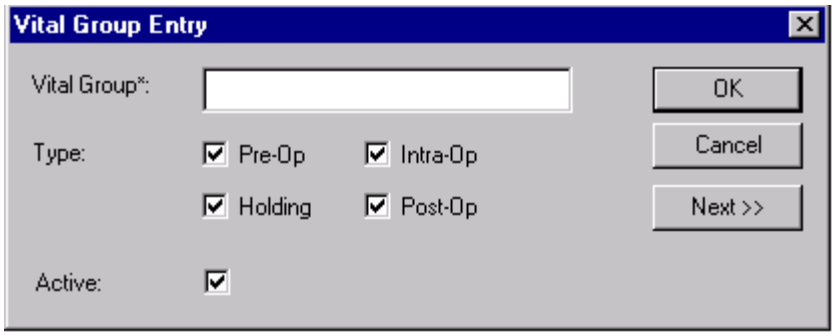

Figure 4-56. Vital Group Entry Dialog Box

Unique List Traits

The following table describes site lists that have unique traits.

Table 4-3. Unique Site List Traits

List Name or List Component	Unique List Trait
AMA CPT Codes	If the AMA CPT codes are loaded in the Procedures list, the groups, subgroups and Procedures site list are read-only. Procedures can be activated or deactivated. Refer to "Activating and Deactivating Groups and List Items" on page 4-15 for more information.
Automatic Data	The automatic data groups list is read-only. In the automatic data items list, only the electronic signature and the color for the item can be changed.
Drug Units	The drug units list is read-only. There is no Entry dialog box for this site list.
Event (Start/Stop Times) When you designate any event as a Milestone Event in the Events Entry dialog box, it will appear on the Demographics page in the Admission section of Recorder (Figure 4-22 on page 4-22). When the milestone event is reached, its check box on the Demographics page is checked automatically. Milestone Event check boxes cannot be selected or cleared manually. *Example:* At the beginning of surgery, the user begins recording data in the OR. The Start of Surgery check box is checked in the Milestone Events window.	The Start/Stop Times event group cannot be changed or deactivated. The following events, which are located under the Start/Stop Times event type, cannot be deactivated, their names cannot be changed, and they cannot be moved to another event group. • End of Anesthesia Care • End of Printed Anesthesia Record • End of Printed Holding Record • End of Printed Post-Op Record • End of Surgery • Scheduled Case End • Scheduled Case Start • Start of Anesthesia Care • Start of Printed Anesthesia Record • Start of Printed Holding Record • Start of Printed Post-Op Record • Start of Surgery
Patient History	You can have duplicate list items among the group lists. History groups are read-only.

Table 4-3. Unique Site List Traits (continued)

List Name or List Component	Unique List Trait
Post-Op Assessment	The Post-Op Assessment Parameter Entry dialog box serves as a group entry dialog box for this site list. You can also have duplicate list items among the group lists.
Post-Op Checks	The Post-Op Checks Parameter Entry dialog box services as a group entry dialog box for this site list. No more than 36 items can be active at one time. You can also have duplicate list items among the group lists.
Post-Op Score	No more than 36 Post-Op score/acuity measure parameters can be active at one time. You can also have duplicate list items among the group lists.
Procedures	The only site list with subgroups. Procedures can be activated or deactivated. Refer to "Activating and Deactivating Groups and List Items" on page 4-15 for more information. You can only edit the Relative Value of a procedure.
Post-Op Patient System Conditions	The Post-Op patient system condition groups list is read-only.
Staff	Duplicate list items are allowed, but there must be a unique Login Name for each duplicate.

5

Final Steps with List Manager

This section explains how to save Saturn Information System lists, how to print those lists, and how to exit List Manager.

Previewing a List Report 5-2
Exporting a List Report to a File 5-3
Printing a List Report 5-5
Printing from the Print Preview Screen 5-5
Printing from the File Menu 5-6
Exiting List Manager 5-6

Previewing a List Report

Use the Print Preview function when you want to view a list report before you print it. If you do not want to preview a report, proceed to "Exporting a List Report to a File" on page 5-3, or "Printing a List Report" on page 5-5.

Note: This function is available only on nonclinical workstations.

Prerequisite

The site list you want to preview must be selected in the Tree Control window. Refer to "Viewing Site Lists, Groups and List Items" on page 4-2.

Procedure

Follow this procedure to preview a list report before you export or print it.

1. Do one of the following depending on the input device you are using:

Touch Screen	Tap the File menu, then tap Print Preview.
Mouse	Click the File menu and then click Print Preview.
Keyboard	Type ALT, F, V to select Print Preview on the File menu.

   The Print Preview dialog box appears.

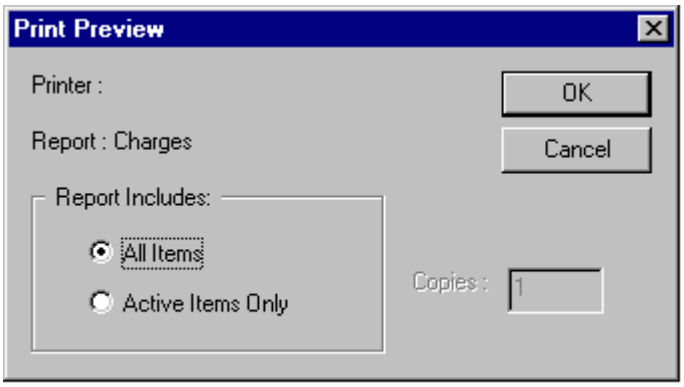

Figure 5-1. Print Preview Dialog Box

2. Select an option button in the Report Includes area.
3. Press OK.

   A preview of the report appears. An example preview is shown in Figure 5-2.

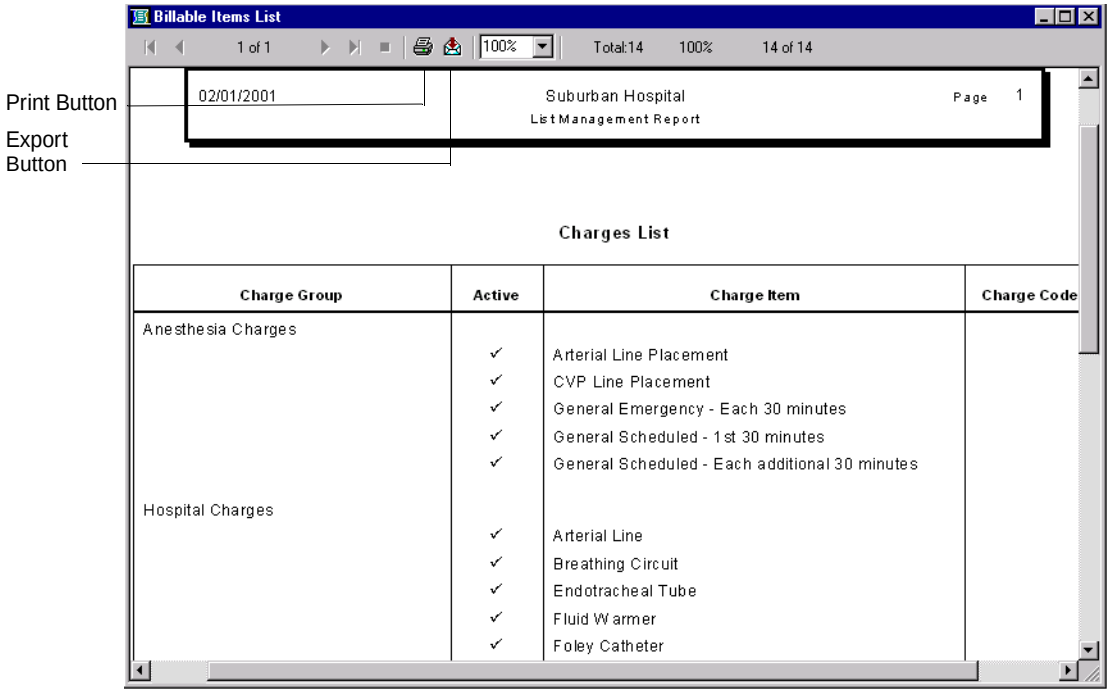

Figure 5-2. Example Preview of a Report before Printing

Exporting a List Report to a File

You can export a list report to a system file, such as an Excel spreadsheet, an HTML file, or a Lotus 1-2-3 work sheet.

Note: This function is available only on nonclinical workstations.

Prerequisite

A Print Preview of the list report must be displayed on the screen. Refer to "Previewing a List Report" on page 5-2.

Procedure

Perform the following to export a list report to a system file.

1. With a print preview of the list displayed on the screen (Figure 5-2), press the Export button on the Print Preview toolbar (Figure 5-2). The Export dialog box appears (Figure 5-3).

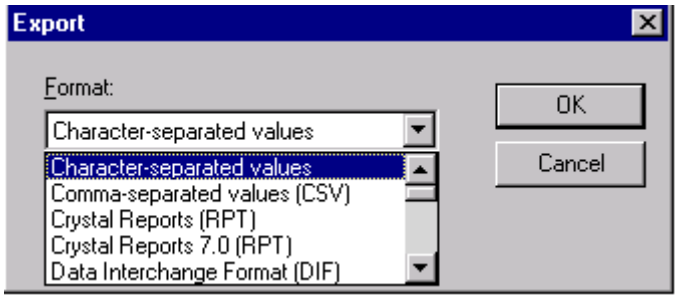

Figure 5-3. Export Dialog Box (Format List Shown)

Note: When you export a report to a file format other than a Seagate Crystal Reports format, you may lose some or all of the formatting that appears in your report. The program attempts to preserve as much formatting as the export format allows.

2. Select a report from the Format list.
3. Select a location in the Destination list (not shown in Figure 5-3).
4. Press OK. Another dialog box may appear, depending on the file type you selected. Make your selections, then press the OK button. The Choose Export File dialog box appears (Figure 5-4).

   Note: The Choose Export File dialog box does not appear when exporting to an HTML file.

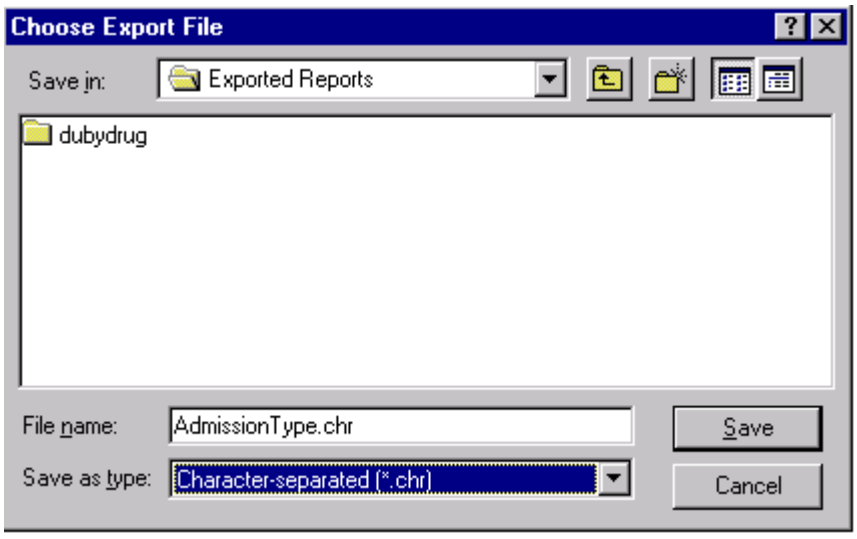

Figure 5-4. Choose Export File Dialog Box

5. Select a location in the Save in and file name for the file, then press the Save button.

Printing a List Report

You can print a list report from inside the Print Preview screen, or by selecting Print on the File menu in List Manager. Both procedures follow.

Note: This function is available only on nonclinical workstations.

Prerequisite

A print preview of the site list or group file you want to print must be displayed on the screen. Refer to "Previewing a List Report" on page 5-2.

Printing from the Print Preview Screen

Perform the following to print a list report within the Print Preview screen.

1. Do one of the following depending on the input device you are using:
   - Using the mouse, click the Print icon (Figure 5-2 on page 5-3) on the toolbar.
   - Using the keyboard, type ALT, F to select the File menu. Then type P to select Print from the File menu.
   - Using the touch screen, tap the Print icon (Figure 5-2 on page 5-3) on the toolbar.

   The Print dialog box appears:

Figure 5-5. Print Dialog Box (Using the Print Button)

2. Select an option button in the Print Range area; the page range in the From and To fields if you selected the Pages option button; and the number of copies in the Copies field.
3. Press OK. The report is printed.

Printing from the File Menu

Perform the following to print a list report from the File menu.

1. In the Tree control window, select the site list you want to print.
2. Do one of the following depending on the input device you are using:
   - Using the mouse, click the Print option on the File menu (Figure 5-2 on page 5-3).
   - Using the keyboard, type ALT, F, P to select Print from the File menu
   - Using the touch screen, tap the File menu, then select Print (Figure 5-6).

   The Print dialog box appears:

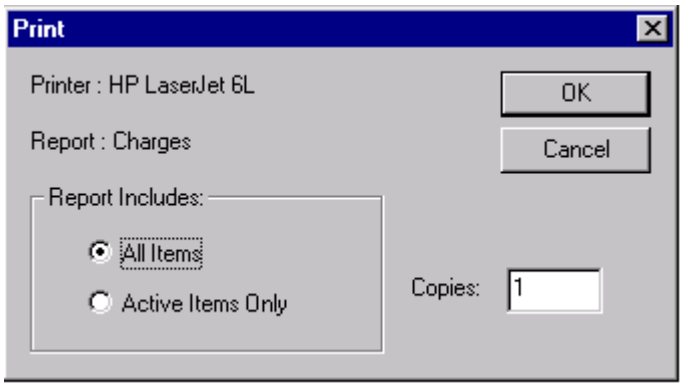

Figure 5-6. Print Dialog Box (Using the File Menu)

3. Select an option button in the Report Includes area, and then select the number of copies in the Copies field.
4. Press OK. The report is printed.

Exiting List Manager

When you are done creating, editing, saving changes and printing list reports, you can exit List Manager.

Procedure

To exit List Manager, follow the procedure for the input device you are using:

Touch Screen	Tap Exit from the File menu.
Mouse	Click Exit from the File menu.
Keyboard	Type ALT, F, X to select Exit.

6

Saturn Application Integration

This section explains the interactive effects that result between the List Manager, Environment Manager, and Recorder application programs.

User Names, Passwords, and Security Rights 6-2
Security Menu Items 6-2
List Manager's Effect on Environment Manager 6-3
Recorder Installed Options 6-3

User Names, Passwords, and Security Rights

Users must be assigned a user name and password before they can use any of the Saturn Information System applications. You assign these security items as well as security rights by adding or editing a Staff list item using List Manager's Staff Entry dialog box (Figure 6-1).

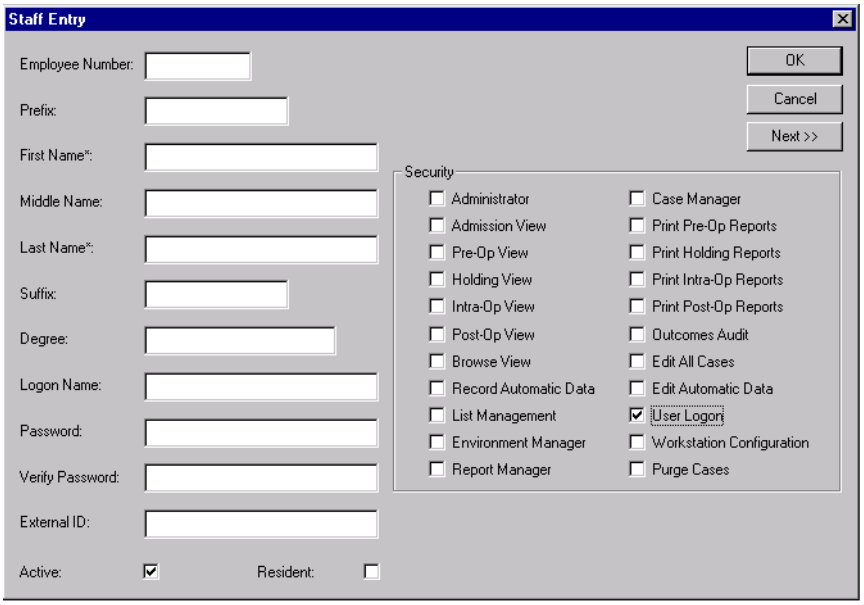

Figure 6-1. Staff Entry Dialog Box

The default for a new user is to have no security rights, and therefore no access to the Saturn Information System. As you give security rights to a user or group of users, those rights will give the user(s) access to the applicable system areas.

It is suggested that only one user should have administrative rights and know the proper user name/password combination to log on to the system as an administrator.

Note: If you forget your administrator user name/password combination, contact your Dräeger Medical, Inc. representative to help you log on to your system.

Security Menu Items

Menu items for which users have not been assigned security rights are disabled and appear grayed-out. For example, if a user does not have Outcomes Audit rights, the Outcome toolbar button and menu items are not selectable.

List Manager's Effect on Environment Manager

Inactive List Items

Using List Manager, you can mark an item belonging to an environment as "inactive." You do this by making sure the Entry dialog box associated with the item displays an empty (not checked) or inactive check box. (To remove a check, simply click on the check box to clear it. The item is made inactive.) When you mark an item used by an environment as "inactive," the item is automatically removed the next time that environment is opened for editing. Refer to "Activating and Deactivating Groups and List Items" on page 4-15 for further details.

Note: To ensure that an inactive item is removed from all environments, open and save each of the environments in Environment Manager.

Recorder Installed Options

Saturn Information System features can be installed in Recorder as options. For example, Outcomes Analysis is an optional feature. If you install Outcomes Analysis in Recorder, Recorder will collect entered outcomes data. When an option is not installed, any menu items, toolbar buttons, and settings referring to that option are disabled. Any tabs referring to that option are not displayed. The installation procedure stores the details about which options are installed in the NT Registry.

Installed options include the following:

- Outcomes
- Environments
- List Manager
- Environment Manager

7

Configuring the System

This section explains how to change system configuration options for the overall Saturn system.

Note: See the Saturn Recorder User's Manual for information regarding configuration options for individual Saturn workstations.

Changing System Options..... 7-2

Changing System Options

System options apply to all of the workstations at your site. For definitions of each system configuration option, refer to Table 7-1 on page 7-5, Table 7-2 on page 7-8, and Table 7-3 on page 7-10.

Prerequisites

The following prerequisites apply to this function:

- You must be logged on to List Manager.
- You must have Administrator rights.

Procedure

Follow this procedure to change system options.

1. From the Utilities menu, choose System Configuration.

   The System Configuration properties sheet appears with the General page displayed on the screen (Figure 7-1).

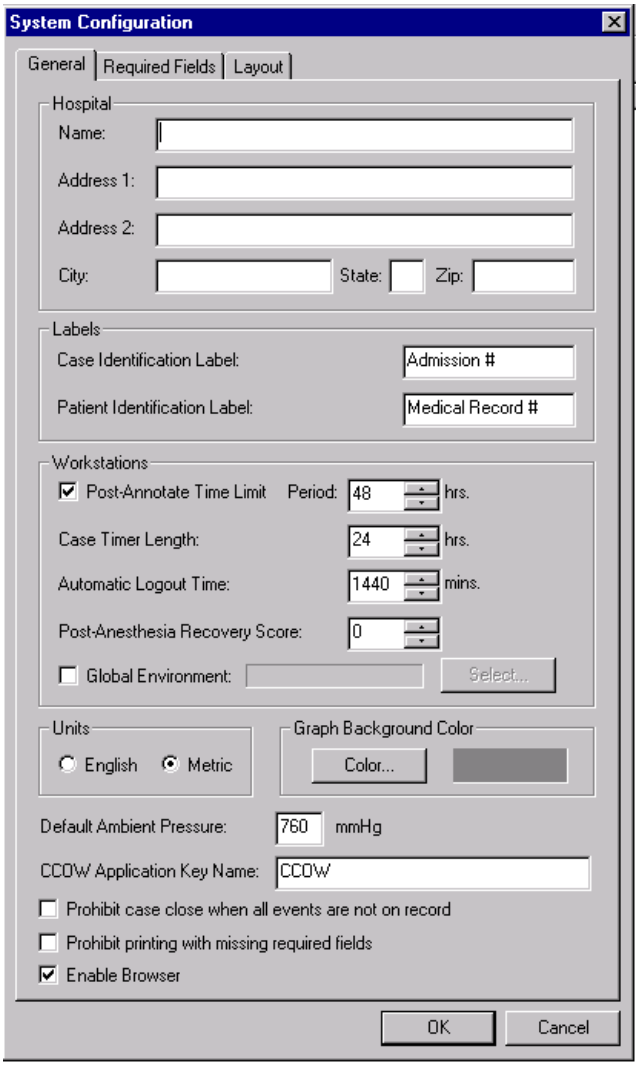

Figure 7-1. System Configuration Properties Screen - General Page

2. Tailor the system configuration options for your site. The options are described in Table 7-1 on page 7-5.
3. Press the Required Fields tab to display the Required Fields page (Figure on page 7-3). This dialog box enables you to select both fields and events that are "required." Fields and events that are selected will be evaluated for valid and complete data when a case is closed. The options are described in "System Configuration Sheet: Required Fields Page" on page 7-8.

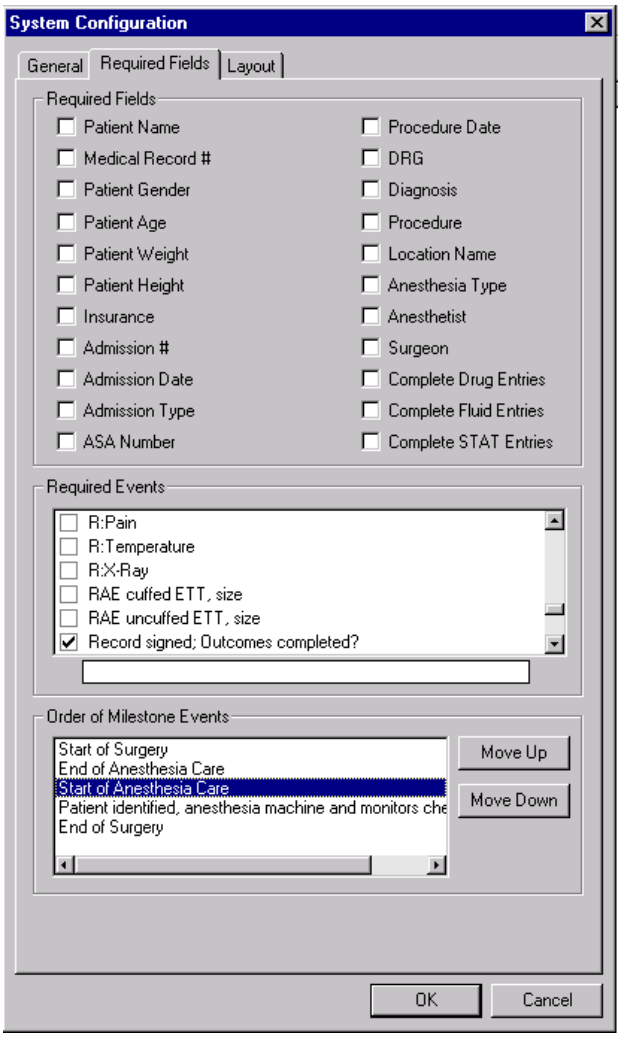

Figure 7-2. System Configuration Property Sheet - Required Fields Page

Note: If you cannot access the Required Fields page, you probably do not have Administrator rights. See your system administrator for assistance.

4. Press the Layout tab to display the Layout page (Figure 7-3 on page 7-4). This dialog box enables you to configure the layout of the Pre-Op, Holding, Intra-Op and Post-Op reports. The options are described in "System Configuration Sheet: Layout Page" on page 7-10.

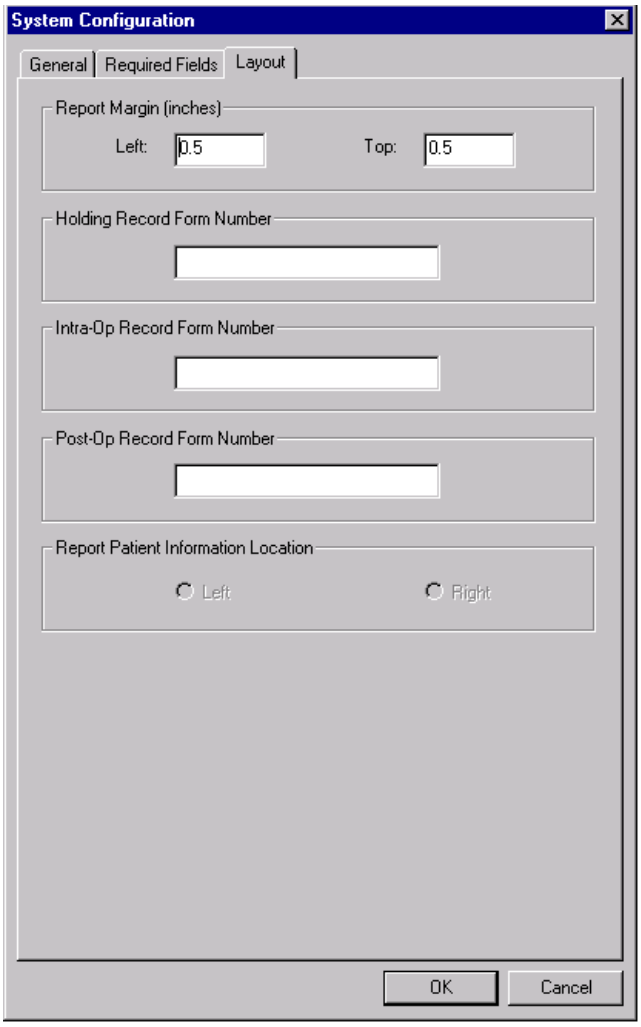

Figure 7-3. System Configuration Property Sheet - Layout Page

5. To save your changes, press the OK button.

System Configuration Sheet: General Page

Table 7-1 describes system configurations relating to hospital, label, workstation, machine default, unit, and background color information. You can edit these properties in the Hospital, Labels, Workstations, Machine Defaults, Units, and Graph Background Color areas of the General page of the System Configuration sheet.

Table 7-1. System Configuration - General Page Options

Option	Description
Hospital Area	
Name	The name of your facility, exactly as you want it to appear on all printed records and reports. *Default:* No default
Address 1	The first address line for your facility, exactly as you want it to appear on all printed records and reports. *Default:* No default
Address 2	The second address line for your facility, exactly as you want it to appear on all printed records and reports. *Default:* No default
City	The city or town where your facility is located, exactly as you want it to appear on all printed records and reports. *Default:* No default
State	The two-letter abbreviation for the state where your facility is located, exactly as you want it to appear on all printed records and reports. *Default:* No default
Zip	Your facility's zip code, exactly as you want it to appear on all printed records and reports. *Default:* No default

Table 7-1. System Configuration - General Page Options (continued)

Option	Description
Labels Area	
Case Identification Label	The label to be used for the case identification field on the screens and on any printed output. *Default:* Admission #
Patient Identification Label	The label to be used for the patient identification field on the screens and on any printed output. *Default:* Medical Record #
Workstations Area	
Post annotate time limit	When checked, indicates that the case can only be edited for a limited period of time after each time that recording is stopped. (You define the time limit in the Period field.) *Default:* Checked
Period	The number of hours available for editing a case after it is closed. (This field is available only if the Post annotate time limit field is checked.) *Default:* 48
Case Timer Length	The length of time, in hours, for the Case Timer. The timer is only active when recording automatic data. If it times out, recording will automatically stop. *Default:* 14
Automatic Logout Time	The number of minutes of allowed for inactivity at a logged-in workstation before you are automatically logged out. *Default:* 60
Post-Anesthesia Recovery Score	The Post-Op acuity measure recovery score value required for the patient to leave Post-Op. *Default:* 0
Global Environment	The environment to be used as a default environment for all cases. The Global Environment is always the first environment loaded when a case is opened. A local environment can then be added to the Global Environment options. *Default:* No default
Units Area	
English or Metric	The units (English or Metric) by which values are to be represented in Recorder. *Default:* Metric

Table 7-1. System Configuration - General Page Options (continued)

Option	Description
Graph Background Color Area	
Color	The background color of the graphs that appear on the Chart pages. *Default:* Dark Gray
General Area	
Default Ambient Pressure	The ambient barometric pressure, including the unit of measure. Saturn uses the ambient pressure to compute gas values. It displays these gas values in the specified unit of measure on the screen and in printed reports. *Note:* If the monitor on the anesthesia machine supplies an ambient pressure to Saturn, the supplied pressure is used instead of the configured value. *Default:* 760 mmHg
CCOW Application Key Name	A name used by all applications configured in the CCOW Patient Context Manager environment. This name can include up to 50 alphanumeric characters, including underscores. *Default:* CCOW
Prohibit case close when all events are not on record	Enables you to select a check box to stop Saturn from closing a case when all of the events are not on the record between Start and End Anesthesia Record times. *Default:* Not checked
Prohibit printing with missing required fields	Enables you to select a check box to stop Saturn from printing a report when all of the required fields are not on the record. *Default:* Not checked
Enable Browser	*When not checked*, a 'Browser is disabled' message is displayed in Recorder when you select the Browse tab; everything is disabled in the Browse section of Recorder. *When checked in List Manager*, the Browser Warning dialog box displays (Figure 7-4). If OK is selected, the dialog is cleared and the check box remains checked. If Cancel is selected, the dialog is cleared and the check box is not checked. When *checked*, you do not receive a message in Recorder, and everything in the Browse section of Recorder is enabled. *Default:* Not checked

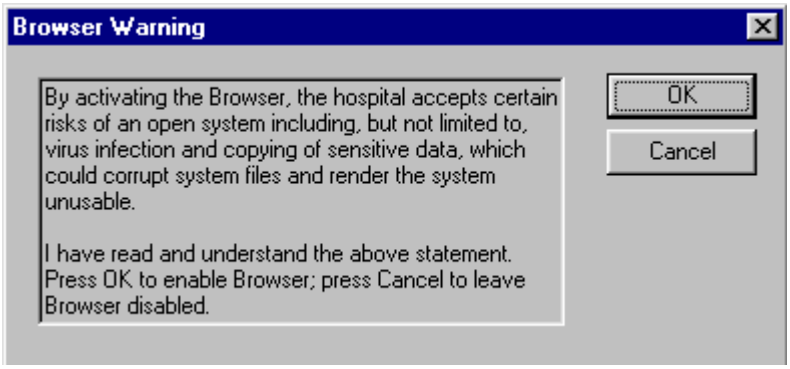
Browser Warning
By activating the Browser, the hospital accepts certain risks of an open system including, but not limited to, virus infection and copying of sensitive data, which could corrupt system files and render the system unusable.
I have read and understand the above statement. Press OK to enable Browser; press Cancel to leave Browser disabled.
OK
Cancel

Figure 7-4. Browser Warning Message Dialog Box

System Configuration Sheet: Required Fields Page

A case is checked for valid data in configured required fields, events, and milestone events when the case ends.

:

Table 7-2. System Configuration - Required Fields Page Options

Patient Name	The patient's name must be entered on the Demographics page of the Admission section.
Medical Record Number	The patient must be assigned a medical record number on the Demographics page of the Admission section.
Patent Gender	The patient's gender must be selected on the Demographics page of the Admission section.
Patient Age	The patient's age must be entered on the Demographics page of the Admission section.
Patient Weight	The patient's weight must be entered on the Demographics page of the Admission section.
Patient Height	The patient's height must be entered on the Demographics page of the Admission section.
Insurance	The patient's insurance type must be entered on the Demographics page of the Admission section.
Admission ID	The patient's admission number must be entered on the Demographics page of the Admission section.
Admission Date	The patient's admission date must be entered on the Demographics page of the Admission section.
Admission Type	The patient's admission type must be entered on the Demographics page of the Admission section.
ASA Number	The patient's ASA number must be entered on the Plan page of the Pre-Op section.

Table 7-2. System Configuration - Required Fields Page Options (continued)

Procedure Date	The patient's surgery date must be entered on the Surgery & Anes. page of the Admission section.
DRG	The patient's DRG must be selected on the Surgery & Anes. page of the Admission section.
Diagnosis	The patient's diagnosis must be entered on the Surgery & Anes. page of the Admission section.
Procedure	The patient's surgical procedure must be entered on the Surgery & Anes. page of the Admission section.
Location Name	The patient's Intra-Op locations must be entered on the Chart page of the Holding section.
Anesthesia Type	The patient's anesthesia type must be entered on the Surgery & Anes. page of the Admission section.
Anesthetist	The anesthetist assigned to the case must be entered on the Surgery & Anes. page of the Admission section.
Surgeon	The surgeon assigned to the case must be entered on the Surgery & Anes. page of the Admission section.
Complete Drug Entries	All drug entries must be complete.
Complete Fluid Entries	All fluid entries must be complete.
Completes STAT Entries	All STAT Event and STAT Drug entries must be complete.

Required fields appear tinted on the interface. If a required field is missing data or contains invalid data, or if a required event was not added to the case, Recorder will display a message dialog box (Figure 7-5) to inform you of the missing or invalid field or event information that is required to close the case.

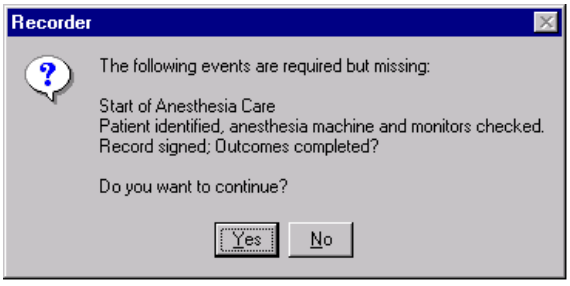

Figure 7-5. Missing Data Dialog Box

System Configuration Sheet: Layout Page

Table 7-3 describes system configurations relating to the desired layout of the reports.

Table 7-3. System Configuration - Layout Page Options

Option	Description
Report Margin Area	
Left	The number of inches of the left margin for all reports. *Default:* No default
Top	The number of inches of the right margin for all reports. *Default:* No default
Holding Record Form Number	
This field indicates the Holding Record Form Number label that will appear on the hospital's Holding Record. *Default:* No default	
Intra-Op Record Form Number	
This field indicates the Intra-Op/OR Record Form Number label that will appear on the hospital's Anesthesia Record. *Default:* No default	
Post-Op Record Form Number	
This field indicates the Post-Op Record Form Number label that will appear on the hospital's Post-Op Record. *Default:* No default	
Report Patient Information Location	
Left	Displays the patient information on the left side of the Anesthesia Record. *Default:* No default
Right	Displays the patient information on the right side of the Anesthesia Record. *Default:* No default

A

Table of Lists

This section provides a table of List Manager's site lists. All lists are included except for Diagnosis, Diagnosis-Related Group, and Procedures. Refer to the appropriate American Medical Association reference guide for items contained in those lists.

Admission Type List....A-3
Anesthesia Type List....A-3
ASA/Physical Status List....A-3
Automatic Data List....A-4
Drug List....A-17
Event List....A-59
Fluid/Gas List....A-68
Insurers List....A-72
Laboratory Items List....A-72
Laboratory Unit List....A-74
Locations List....A-75
Patient History List....A-75
Patient Systems List....A-77
Post-Op Care List....A-80
Pre-Procedure Status List....A-80
Route List....A-81
Staff List....A-81
Manual Vital Units List....A-82
Manual Vitals List....A-82

A Table of Lists

Admission Type List

Admission Type
Emergency
Inpatient
Outpatient
Same Day

Anesthesia Type List

Anesthesia Type
Bier Block
Caudal
Epidural
General
Intravenous
Local
MAC
Regional Nerve Block
Spinal

ASA/Physical Status List

Physical Status	Description	Relative Value
1	A normal healthy patient	
1E	A normal healthy patient - Emergency	
2	A patient with mild systemic disease	
2E	A patient with mild systemic disease - Emergency	
3	A patient with severe systemic disease	
3E	A patient with severe systemic disease - Emergency	
4	A patient with severe systemic disease that is a c	
4E	A patient with severe systemic disease that is a c	
5	A moribund patient who is not expected to survive	
5E	A moribund patient who is not expected to survive	

Automatic Data List

Automatic Data Group	Automatic Data Item	Display Color
Arterial Hemoglobin Oxygen		
	SA02 (BXT)	Blue
Bispectra Index		
	BIS INDEX (ASP)	Green
Cardiac Output		
	CO	Red
	CO (DAS3)	Red
	CO (HPM)	Red
	CO NONCONT (MRQ)	Red
	CO NONCONT (SPC)	Red
	CO NONCONT (BXT)	Red
Continuous Cardiac Output		
	CO CONT	Red
	CO CONT (BXT)	Red
Diastolic Arterial Blood Pressure		
	ART1 DIAS	Red
	P2 ART DIAS	Red
	ART1 DIAS (DAS3)	Red
	P2 ART DIAS (DAS3)	Red
	P2 ART DIAS (HPM)	Red
	ART1 DIAS (HPM)	Red
	ART DIAS 1 (MRQ)	Red
	ART1 DIAS (SPC)	Red
Diastolic Blood Pressure		
	P1 DIAS	White
	P2 DIAS	White
	P3 DIAS	White
	P4 DIAS	White
	P1 DIAS (DAS3)	White
	P2 DIAS (DAS3)	White
	P3 DIAS (DAS3)	White
	P4 DIAS (DAS3)	White
	P1 DIAS (HPM)	White
	P2 DIAS (HPM)	White
	P3 DIAS (HPM)	White
	P4 DIAS (HPM)	White
	P1 DIAS (DTX)	White
	P2 DIAS (DTX)	White
Diastolic Central Venous Blood Pressure		
	CVP2 DIAS	Green
	CVP2 DIAS (DAS3)	Green
	CVP2 DIAS (MRQ)	Green
Diastolic Continuous Blood Pressure	CBP DIAS CONT	White

Automatic Data Group	Automatic Data Item	Display Color
Diastolic Left Atrial Blood Pressure		
	LAP DIAS	Red
	LAP DIAS (DAS3)	Red
	LAP DIAS (MRQ)	Red
Diastolic Noninvasive Blood Pressure		
	NIBP DIAS	Red
	NIBP DIAS (DAS3)	Red
	NIBP DIAS (HPM)	Red
	NIBP DIAS (MRQ)	Red
	NIBP DIAS (SPC)	Red
	NIBP DIAS (DTX)	Red
Diastolic Pulmonary Artery Blood Pressu		
	PA DIAS	Yellow
	PA DIAS (HPM)	Yellow
	PA DIAS (MRQ)	Yellow
	PA DIAS (SPC)	Yellow
Diastolic Right Atrial Blood Pressure		
	RA DIAS	Red
	RA DIAS (DAS3)	Red
	RA DIAS (MRQ)	Red
Diastolic Right Ventrical Blood Pressure		
	RV DIAS	Red
	PA DIAS (DAS3)	Red
	RV DIAS (DAS3)	Red
	RV DIAS (HPM)	Red
Diastolic Tonometry Blood Pressure		
	TBP DIAS	Red
ECG Heart Rate		
	HEART RATE	Green
	HEART RATE (DAS3)	Green
	HEART RATE (HPM)	Green
	HEART RATE (MRQ)	Green
	HEART RATE (SPC)	Green
	HEART RATE (BXT)	Green
ECG ST Segment		
	ECG ST 1	White
	ECG ST 2	White
	ECG ST 3	White
	ECG ST 1 (DAS3)	White
	ECG ST 2 (DAS3)	White
	ECG ST 3 (DAS3)	White

Automatic Data Group	Automatic Data Item	Display Color
Electromyography	EMG (ASP)	Light Green
	ECG ST 1 (HPM)	White
	ECG ST 2 (HPM)	White
	ECG ST 3 (HPM)	White
End Tidal CO2		
	ET CO2 %	Black
	ET CO2 KPA	Black
	ET CO2	Black
	ET CO2 % (DAS3)	Black
	ET CO2 % (HPM)	Black
	ET CO2 KPA (HPM)	Black
	ET CO2 (HPM)	Black
	ET CO2 (MRQ)	Black
	ET CO2 (SPC)	Black
	ET CO2 KPA (SPC)	Black
	ET CO2 % (SPC)	Black
	ET CO2 % (DTX)	Black
	ET CO2 KPA (DTX)	Black
	ET CO2 (DTX)	Black
	ET CO2 % (NV1)	Black
	ET CO2 KPA (NV1)	Black
	ET CO2 (NV1)	Black
	ET CO2 % (DGR)	Black
	ET CO2 KPA (DGR)	Black
	ET CO2 (DGR)	Black
Expiratory Agent		
	EXP AGENT	White
	EXP AGENT	White
	EXP AGENT (DAS3)	White
	EXP AGENT (HPM)	White
	EXP AGENT (DTX)	White
	EXP AGENT (DGR)	White
Expiratory Desflurane		
	EXP DES	White
	EXP DES (DAS3)	White
	EXP DES (HPM)	White
	EXP DES (MRQ)	White
	EXP DES (DTX)	White
	EXP DES (DGR)	White
Expiratory Enflurane		
	EXP ENF	White
	EXP ENF (DAS3)	White
	EXP ENF (HPM)	White

Automatic Data Group	Automatic Data Item	Display Color
	EXP ENF (MRQ)	White
	EXP ENF (DTX)	White
	EXP ENF (DGR)	White
Expiratory Halothane		
	EXP HALO	White
	EXP HALO (DAS3)	White
	EXP HALO (HPM)	White
	EXP HALO (MRQ)	White
	EXP HALO (DTX)	White
	EXP HALO (DGR)	White
Expiratory Isoflurane		
	EXP ISO	White
	EXP ISO (DAS3)	White
	EXP ISO (HPM)	White
	EXP ISO (MRQ)	White
	EXP ISO (DTX)	White
	EXP ISO (DGR)	White
Expiratory N2O		
	EXP N2O	Blue
	EXP N2O (DAS3)	Blue
	EXP N2O (HPM)	Blue
	EXP N2O (MRQ)	Blue
	EXP N2O (DTX)	Blue
	EXP N2O (DGR)	Blue
Expiratory Sevoflurane		
	EXP SEV	White
	EXP SEV (DAS3)	White
	EXP SEV (HPM)	White
	EXP SEV (MRQ)	White
	EXP SEV (DTX)	White
	EXP SEV (DGR)	White
Fast Expiratory Oxygen		
	EXP O2 FAST	Green
	EXP O2 FAST (HPM)	Green
Fast Freshgas Oxygen		
	FG O2 FAST %	Green
Fast Inspiratory Oxygen		
	INSP O2 FAST	Green
	INSP O2 FAST (HPM)	Green

Automatic Data Group	Automatic Data Item	Display Color
Freshgas Agent		
	FG AGENT	White
Freshgas Air Flow Rate		
	FG AIR FLOW	Yellow
	FG AIR FLOW (DGR)	Yellow
Freshgas Desflurane		
	FG DES	White
Freshgas Enflurane		
	FG ENF	White
Freshgas Flow Rate		
	FG FLOW	White
	FG FLOW (DGR)	White
Freshgas Halothane		
	FG HALO	White
Freshgas Isoflurane		
	FG ISO	White
Freshgas N2O		
	FG N2O %	Blue
Freshgas N2O Flow Rate		
	FG N2O FLOW	Blue
	FG N2O FLOW (DGR)	Blue
Freshgas Oxygen Flow Rate		
	FG O2 FLOW	Green
	FG O2 FLOW (DGR)	Green
Freshgas Sevoflurane		
	FG SEV	White
Inspiratory Agent		
	INSP AGENT	White
	INSP AGENT	White
	INSP AGENT (DAS3)	White
	INSP AGENT (HPM)	White
	INSP AGENT (DTX)	White
	INSP AGENT (DGR)	White

Automatic Data Group	Automatic Data Item	Display Color
Inspiratory C02		
	INSP CO2 %	Black
	INSP CO2 KPA	Black
	INSP CO2	Black
	INSP CO2 % (DAS3)	Black
	INSP CO2 % (HPM)	Black
	INSP CO2 KPA (HPM)	Black
	INSP CO2 (HPM)	Black
	INSP CO2 (MRQ)	Black
	INSP CO2 (SPC)	Black
	INSP CO2 KPA (SPC)	Black
	INSP CO2 % (SPC)	Black
	INSP CO2 % (DTX)	Black
	INSP CO2 KPA (DTX)	Black
	INSP CO2 (DTX)	Black
	INSP CO2 % (NV1)	Black
	INSP CO2 KPA (NV1)	Black
	INSP CO2 (NV1)	Black
	INSP CO2 % (DGR)	Black
	INSP CO2 (DGR)	Black
	INSP CO2 KPA (DGR)	Black
Inspiratory Desflurane		
	INSP DES	White
	INSP DES (DAS3)	White
	INSP DES (HPM)	White
	INSP DES (MRQ)	White
	INSP DES (DTX)	White
	INSP DES (DGR)	White
Inspiratory Enflurane		
	INSP ENF	White
	INSP ENF (DAS3)	White
	INSP ENF (HPM)	White
	INSP ENF (MRQ)	White
	INSP ENF (DTX)	White
	INSP ENF (DGR)	White
Inspiratory Halothane		
	INSP HALO	White
	INSP HALO (DAS3)	White
	INSP HALO (HPM)	White
	INSP HALO (MRQ)	White
	INSP HALO (DTX)	White
	INSP HALO (DGR)	White

Automatic Data Group	Automatic Data Item	Display Color
Inspiratory Isoflurane		
	INSP ISO	White
	INSP ISO (DAS3)	White
	INSP ISO (HPM)	White
	INSP ISO (MRQ)	White
	INSP ISO (DTX)	White
	INSP ISO (DGR)	White
Inspiratory N2O		
	INSP N2O	Blue
	INSP N2O (DAS3)	Blue
	INSP N2O (HPM)	Blue
	INSP N2O (MRQ)	Blue
	INSP N2O (DTX)	Blue
	INSP N2O (DGR)	Blue
Inspiratory Sevoflurane		
	INSP SEV	White
	INSP SEV (DAS3)	White
	INSP SEV (HPM)	White
	INSP SEV (MRQ)	White
	INSP SEV (DTX)	White
	INSP SEV (DGR)	White
Invasive Pulse Rate		
	INV PULSE	Red
	INV PULSE (DAS3)	Red
	INV PULSE (MRQ)	Red
Mean Arterial Blood Pressure		
	ART1 MEAN	Red
	P2 ART MEAN	Red
	ART1 MEAN (DAS3)	Red
	P2 ART MEAN (DAS3)	Red
	P2 ART MEAN (HPM)	Red
	ART1 MEAN (HPM)	Red
	ART MEAN 1 (MRQ)	Red
	ART1 MEAN (SPC)	Red
Mean Blood Pressure		
	P1 MEAN	White
	P2 MEAN	White
	P3 MEAN	White
	P4 MEAN	White
	P1 MEAN (DAS3)	White
	P2 MEAN (DAS3)	White

Automatic Data Group	Automatic Data Item	Display Color
	P3 MEAN (DAS3)	White
	P4 MEAN (DAS3)	White
	P1 MEAN (HPM)	White
	P2 MEAN (HPM)	White
	P3 MEAN (HPM)	White
	P4 MEAN (HPM)	White
	P1 MEAN (DTX)	White
	P2 MEAN (DTX)	White
Mean Breathing Pressure		
	MEAN BR PRES	Yellow
	MEAN BR PRES (OHV)	Yellow
	MEAN BR PRES (DGR)	Yellow
Mean Central Venous Blood Pressure		
	CVP2 MEAN 2 (BXT)	Green
	CVP2 MEAN	Green
	CVP2 MEAN (DAS3)	Green
	CVP2 MEAN (HPM)	Green
	CVP2 MEAN (MRQ)	Green
	CVP2 MEAN (SPC)	Green
Mean Continuous Blood Pressure		
	CBP MEAN CONT	White
Mean Left Atrial Blood Pressure		
	LAP MEAN	Red
	LAP MEAN (DAS3)	Red
	LAP MEAN (HPM)	Red
	LAP MEAN (MRQ)	Red
	LAP MEAN (SPC)	Red
Mean Noninvasive Blood Pressure		
	NIBP MEAN	Red
	NIBP MEAN (DAS3)	Red
	NIBP MEAN (HPM)	Red
	NIBP MEAN (MRQ)	Red
	NIBP MEAN (SPC)	Red
	NIBP MEAN (DTX)	Red
Mean Pulmonary Artery Blood Pressure		
	PA MEAN	Yellow
	PA MEAN (DAS3)	Yellow
	PA MEAN (HPM)	Yellow
	PA MEAN (MRQ)	Yellow
	PA MEAN (SPC)	Yellow

Automatic Data Group	Automatic Data Item	Display Color
Mean Right Atrial Blood Pressure		
	RA MEAN	Red
	RA MEAN (DAS3)	Red
	RA MEAN (HPM)	Red
	RA MEAN (MRQ)	Red
	RA MEAN (SPC)	Red
Mean Right Ventrical Blood Pressure		
	RV MEAN	Red
	RV MEAN (DAS3)	Red
	RV MEAN (HPM)	Red
Mean Tonometry Blood Pressure		
Oximeter Pulse Amplitude		
	PULSE AMP.	Blue
Oximeter Pulse Rate		
	SP02 PULSE	Blue
	SPO2 PULSE (DAS3)	Blue
	SPO2 PULSE (MRQ)	Blue
	SPO2 PULSE (DTX)	Blue
	SP02 PULSE (NV5)	Blue
	SP02 PULSE (DGR)	Blue
PC Wedge Pressure		
	PCWP	Blue
	PCWP (DAS3)	Blue
	PCWP (SPC)	Blue
Peak Breathing Pressure		
	PIP PRES	Yellow
	PIP PRES (DAS3)	Yellow
	PIP PRES (OHV)	Yellow
	PIP PRES (DGR)	Yellow
Peripheral Oximeter Saturation		
	SPO2	Blue
	SPO2 (DAS3)	Blue
	SPO2 (HPM)	Blue
	O2 SAT (MRQ)	Blue
	O2 SAT (SPC)	Blue
	O2 SAT (DTX)	Blue
	SPO2 (NV5)	Blue
	SPO2 (DGR)	Blue

Automatic Data Group	Automatic Data Item	Display Color
Positive Expiratory End Breathing Press		
	PEEP PRES	Yellow
	PEEP PRES (DAS3)	Yellow
	PEEP PRES (DGR)	Yellow
Pulminary Artery Wedge Pressure		
	PAWP	Blue
	PAWP (HPM)	Blue
Pulse Continuous Blood Pressure		
	CBP PULSE	White
Pulse Noninvasive Blood Pressure		
	NIBP PULSE	Red
	NIBP PULSE (DAS3)	Red
	NIBP PULSE (MRQ)	Red
Pulse Rate		
	PULSE (UNKNOWN)	Green
	PULSE (HPM) (UNKNOWN)	Green
	PULSE UNKOWN (DTX)	Green
Respiratory Minute Volume		
	MINUTE VOLUME	Blue
	MINUTE VOLUME (OHV)	Blue
	MINUTE VOLUME (DGR)	Blue
Respiratory Rate		
	RESP RATE	Green
	RESP RATE (HPM)	Green
	BPM (MRQ)	Green
	BPM (SPC)	Green
	BPM (DTX)	Green
	RESP RATE (OHV)	Green
	RESP RATE PRESS (DGR)	Green
	RESP RATE (DGR)	Green
Respiratory Rate CO2		
	RESP RATE CO2	White
	RESP RATE CO2 (DAS3)	White
	CO2 BPM (MRQ)	White
	CO2 BPM (SPC)	White
	CO2 BPM (DTX)	White
	RESP RATE CO2 (NV1)	White
	RESP RATE CO2 (DGR)	White

Automatic Data Group	Automatic Data Item	Display Color
Respiratory Rate Volume		
	RESP RATE VOL	Blue
	RESP RATE VOL (DAS3)	Blue
	RESP RATE VOL (DGR)	Blue
Respiratory Tidal Volume		
	TIDAL VOLUME	Blue
	TIDAL VOLUME (DAS3)	Blue
	TIDAL VOLUME (OHV)	Blue
	TIDAL VOLUME (DGR)	Blue
Signal Quality Index		
	SQI (ASP)	Light Yellow
Slow Expiratory Oxygen		
	EXP O2 SLOW	Green
	EXP O2 SLOW (DAS3)	Green
	EXP O2 SLOW (MRQ)	Green
	EXP O2 SLOW (DTX)	Green
	EXP O2 SLOW (DGR)	Green
Slow Freshgas Oxygen		
	FG O2 SLOW %	Green
Slow Inspiratory Oxygen		
	INSP O2 SLOW	Green
	INSP O2 SLOW(DAS3)	Green
	INSP O2 SLOW (MRQ)	Green
	INSP O2 SLOW (DTX)	Green
	INSP O2 SLOW (OHV)	Green
	INSP O2 SLOW (DGR)	Green
Systolic Arterial Blood Pressure		
	ART1 SYS	Red
	P2 ART SYS	Red
	ART1 SYS (DAS3)	Red
	P2 ART SYS (DAS3)	Red
	P2 ART SYS (HPM)	Red
	ART1 SYS (HPM)	Red
	ART SYS 1 (MRQ)	Red
	ART1 SYS (SPC)	Red
Systolic Blood Pressure		
	P1 SYS	White
	P2 SYS	White
	P3 SYS	White
	P4 SYS	White
	P1 SYS (DAS3)	White
	P2 SYS (DAS3)	White

Automatic Data Group	Automatic Data Item	Display Color
	P3 SYS (DAS3)	White
	P4 SYS (DAS3)	White
	P1 SYS (HPM)	White
	P2 SYS (HPM)	White
	P3 SYS (HPM)	White
	P4 SYS (HPM)	White
	P1 SYS (DTX)	White
	P2 SYS (DTX)	White
Systolic Central Venous Blood Pressure		
	CVP2 SYS	Green
	CVP2 SYS (DAS3)	Green
	CVP2 SYS (MRQ)	Green
Systolic Continuous Blood Pressure		
	CBP SYS CONT	White
Systolic Left Atrial Blood Pressure		
	LAP SYS	Red
	LAP SYS (DAS3)	Red
	LAP SYS (MRQ)	Red
Systolic Noninvasive Blood Pressure		
	NIBP SYS	Red
	NIBP SYS (DAS3)	Red
	NIBP SYS (HPM)	Red
	NIBP SYS (MRQ)	Red
	NIBP SYS (SPC)	Red
	NIBP SYS (DTX)	Red
Systolic Pulmonary Artery Blood Pressur		
	PA SYS	Yellow
	PA SYS (DAS3)	Yellow
	PA SYS (HPM)	Yellow
	PA SYS (MRQ)	Yellow
	PA SYS (SPC)	Yellow
Systolic Right Atrial Blood Pressure		
	RA SYS	Red
	RA SYS (DAS3)	Red
	RA SYS (MRQ)	Red
Systolic Right Ventrical Blood Pressure		
	RV SYS	Red
	RV SYS (DAS3)	Red
	RV SYS (HPM)	Red

Automatic Data Group	Automatic Data Item	Display Color
Systolic Tonometry Blood Pressure		
	TBP SYS	Red
Temperature		
	BLOOD TEMP (BXT)	Red
	TEMP 2	White
	TEMP 1	White
	TEMP 1 (DAS3)	White
	TEMP 2 (DAS3)	White
	TEMP 1 (HPM)	White
	TEMP 2 (HPM)	White
	TEMP 1 (MRQ)	White
	TEMP 2 (MRQ)	White
	TEMP 1 (SPC)	White
	TEMP 2 (SPC)	White
	TEMP 1 (DTX)	White
	TEMP 2 (DTX)	White
Venous Hemoglobin Oxygen Saturation		
	SVO2 (BXT)	Blue
	SVO2	Blue

Drug List

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
AlphaBeta Agonist					
	ephedrine	IV	mg	5.00	12.50
		Auto	mg	10.00	25.00
	PHENYLEPH INF	IV	ug/kg/min		
		Auto	ug		
	phenylephrine	IV	mcg	25.00	100.00
		Auto	mcg	50.00	200.00
	phenylephrine spray	NAS	puffs	1.00	3.00
		Auto	puffs	2.00	4.00
AlphaBetaBlocker					
	atenolol	IV	mg	2.50	
		Auto	mg	5.00	
	clonidine	PO	mg	0.30	0.10
		Auto	mg	0.20	
	clonidine transderm	TOP	mg	0.10	0.30
		Auto	mg	0.20	0.40

Drug Group Name	Name	Route / Total Type	Unit / Totaling Units	Default Dosage 1 / Default Dosage 2	Default Dosage 3 / Default Dosage 4
	esmolol	IV	mg	10.00	60.00
		Auto	mg	20.00	80.00
	ESMOLOL INF	IV	ug/kg/min	50.00	150.00
		Auto	ug	100.00	500.00
	labetalol	IV	mg	2.50	7.50
		Auto	mg	5.00	10.00
	LABETALOL INF	IV	mcg/kg/min		
		Auto	mcg		
	metoprolol	IV	mg	5.00	
		Auto	mg		
	propranolol	IV	mg	0.50	2.00
		Auto	mg	1.00	3.00
Analgesic					
	acetaminophen	PR	mg	120.00	650.00
		Auto	mg	325.00	
	ketorolac99	IV	mg	15.00	60.00
		Auto	mg	30.00	
Anti-arrhythmic					

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
	adenosine	IV	mg	3.00	
		Auto	mg	6.00	
	bretylium	IV	mg	350.00	
		Auto	mg	500.00	
	disopyramide	PO	mg	100.00	200.00
		Auto	mg	150.00	300.00
	LIDO IV INF	IV	mg/min		
		Auto	mg		
	lidocaine	IV	mg	50.00	75.00
		Auto	mg	100.00	
	procainamide	IV	mg/min	2.00	6.00
		Auto	mg	4.00	
Anti-Convulsant					
	phenytoin	IV	mg	50.00	250.00
		Auto	mg	100.00	5,000.00
Antibiotic					
	altrofloxacin	IV	mg	200.00	
		Auto	mg	300.00	

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
	amoxicillin	IV	mg	500.00	
		Auto	mg	1,000.00	
	ampicillin	IV	mg	500.00	2,000.00
		Auto	mg	1,000.00	
	aztreonam	IV	mg	500.00	2,000.00
		Auto	mg	1,000.00	
	bacitracin	TOP	mg		
		Auto	mg		
	cefaclor	PO	mg	250.00	500.00
		Auto	mg		
	cefamandole	IV	mg	500.00	1,500.00
		Auto	mg	1,000.00	2,000.00
	cefazolin	IV	mg	500.00	2,000.00
		Auto	mg	1,000.00	
	cefotaxime	IV	mg	500.00	2,000.00
		Auto	mg	1,000.00	
	cefotetan	IV	gm	1.00	3.00

Drug Group Name	Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Units	Default Dosage 2	Default Dosage 4
		Auto	gm	2.00	4.00
	cefoxitin	IV	gm	1.00	3.00
		Auto	gm	2.00	
	ceftazidime	IV	gm	1.00	
		Auto	gm	2.00	
	ceftizoxime	IV	mg	500.00	2,000.00
		Auto	mg	1,000.00	
	ceftriaxone	IV	gm	1.00	
		Auto	gm	2.00	
	cefuroxime	IV	gm	0.75	
		Auto	gm	1.50	
	cephalothin	IV	mg	500.00	1,000.00
		Auto	mg		
	ciprofloxacin	IV	mg	200.00	
		Auto	mg	400.00	
	clindamycin	IV	mg	150.00	600.00
		Auto	mg	300.00	1,200.00

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
	doxycycline	IV	mg	100.00	
		Auto	mg	200.00	
	erythromycin	IV	mg	250.00	1,000.00
		Auto	mg	500.00	
	gentamicin	IV	mg	80.00	120.00
		Auto	mg	100.00	
	IMIPENEM SLOW INF	IV	mg	250.00	
		Auto	mg	500.00	
	metronidazole	IV	mg	500.00	
		Auto	mg	1,000.00	
	nafcillin	IV	mg	500.00	
		Auto	mg	1,000.00	
	penicillin G	IV	mg	500.00	
		Auto	mg	1,000.00	
	tetracycline	IV	mg	250.00	
		Auto	mg	500.00	
	ticarcillin	IV	gm	2.00	4.00

Drug Group Name	Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Units	Default Dosage 2	Default Dosage 4
		Auto	gm	3.00	
	tobramycin	IV	mg	50.00	80.00
		Auto	mg	70.00	120.00
	Unasyn	IV	gm	1.50	
		Auto	gm	3.00	
	vancomycin	IV	mg	1,000.00	
		Auto	mg		
Anticholinergic					
	atropine	IV	mg	0.20	
		Auto	mg	0.40	
	glycopyrrolate	IV	mg	0.20	0.60
		Auto	mg	0.40	0.80
	scopolamine	IV	mg	0.20	0.60
		Auto	mg	0.40	
Anticoagulant					
	ancrod	IV	--		
		Auto	--		
	dextran LMW	IV	ml	30.00	50.00

Drug Group Name	Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Units	Default Dosage 2	Default Dosage 4
		Auto	ml	15.00	30.00
	DEXTRAN LMW INF	IV	ml/hour		
		Auto	ml		
	enoxaparin	SC	mg	30.00	
		Auto	mg	40.00	
	HEPARIN INF	IV	units/hr		
		Auto	units		
	heparin-units x 1000	IV	units	1.00	10.00
		Auto	mg	5.00	30.00
Antiemetic					
	anzemet	IV	mg	12.50	
		Auto	mg	25.00	
	dimenhydrinate	IV	mg		
		Auto	mg		
	droperidol	IV	mg	0.06	1.25
		Auto	mg	0.75	2.50
	hydroxyzine	IM	mg	25.00	
		Auto	mg		

Drug Group Name	Name	Route / Total Type	Unit / Totaling Units	Default Dosage 1 / Default Dosage 2	Default Dosage 3 / Default Dosage 4
	metoclopramide	IV	mg	10.00	
		Auto	mg		
	ondansetron	IV	mg	2.00	6.00
		Auto	mg	4.00	8.00
	prochlorperzaine	IV	mg	2.50	7.50
		Auto	mg	5.00	10.00
	promethazine	IV	mg	12.50	
		Auto	mg	25.00	
Antihistamine					
	cimetidine	IV	mg	300.00	1,200.00
		Auto	mg	600.00	
	diphenhydramine	IV	mg	25.00	50.00
		Auto	mg	12.50	
	famotidine	IV	mg	20.00	
		Auto	mg		
	ranitidine	IV	mg	50.00	
		Auto	mg		
	RANITIDINE INF	IV	mg/kg/hr	1.00	

Drug Group Name	Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Units	Default Dosage 2	Default Dosage 4
		Auto	mg	2.50	
Beta Blocker					
	diltiazem	IV	mg	10.00	15.00
		Auto	mg	15.00	25.00
	NICARDIPINE INF	IV	mg/hr	3.00	10.00
		Auto	mg	5.00	
	nimodipine	PO	mg	30.00	
		Auto	mg		
	verapamil	IV	mg	2.50	7.50
		Auto	mg	5.00	10.00
Bronchodilator					
	albuterol	INH	puffs		
		Auto	puffs		
	albuterol inhaler	INH	puffs	1.00	3.00
		Auto	puffs	2.00	4.00
	albuterol neb 0.5%	INH	ml	0.50	
		Auto	ml	1.00	
	aminophylline	IV	mg	350.00	

Drug Group Name	Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Units	Default Dosage 2	Default Dosage 4
		Auto	mg	500.00	
Coagulant					
	aminocaproic acid	IV	gm		
		Auto	gm		
	AMINOCAPROIC INF	IV	mg/hr		
		Auto	mg		
	aprotinin	IV	ml	100.00	
		Auto	ml	200.00	
	APROTININ INF	IV	ml		
		Auto	ml		
	DDAVP slow bolus	IV	mcg	15.00	
		Auto	mcg	30.00	
	protamine	IV	mg	25.00	300.00
		Auto	mg	50.00	350.00
Diuretic					
	ethacrynic acid	IV	mg	50.00	
		Auto	mg	100.00	
	furosemide	IV	mg	5.00	20.00

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
		Auto	mg	10.00	40.00
	mannitol 20%	IV	gm		
		Auto	gm		
	mannitol 25%	IV	gm	12.50	
		Auto	gm	25.00	
Induction					
	brevital	IV	mg	30.00	50.00
		Auto	mg	40.00	100.00
	etomidate	IV	mg	10.00	20.00
		Auto	mg	15.00	30.00
	ketamine	IV	mg	20.00	100.00
		Auto	mg	50.00	150.00
	KETAMINE INF	IV	mcg/kg/min		
		Auto	mcg		
	methohexital sodium	IV	mg	50.00	150.00
		Auto	mg	100.00	200.00
	propofol	IV	mg	50.00	150.00
		Auto	mg	100.00	200.00

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
	PROPOFOL INF	IV	ug/kg/min	40.00	100.00
		Auto	ug	80.00	120.00
	thiopental	IV	mg	100.00	250.00
		Auto	mg	250.00	500.00
	THIOPENTAL INF	IV	mg/hr		
		Auto	mg		
Inotrope					
	amiodarone	IV	mg		
		Auto	mg		
	AMIODARONE INF	IV	mg/hr		
		Auto	mg		
	calcium chloride	IV	mg	500.00	
		Auto	mg	1,000.00	
	calcium gluconate	IV	mg	500.00	
		Auto	mg	1,000.00	
	digoxin immune Fab	IV	mg	228.00	
		Auto	mg	760.00	
	digoxin slow bolus	IV	mg	0.13	0.50

Drug Group Name	Name	Route / Total Type	Unit / Totaling Units	Default Dosage 1 / Default Dosage 2	Default Dosage 3 / Default Dosage 4
		Auto	mg	0.25	
	dobutamine	IV	ug/kg/min	1.00	5.00
		Auto	ug	2.50	10.00
	dopamine	IV	ug/kg/min	1.00	5.00
		Auto	ug	2.50	10.00
	epinephrine	IV	ug	5.00	100.00
		Auto	ug	10.00	1,000.00
	EPINEPHRINE INF	IV	ug/kg/min	0.10	0.50
		Auto	ug	0.20	1.00
	isoproterenol	IV	mcg		
		Auto	mcg		
	ISOPROTERENOL INF	IV	mcg/kg/min		
		Auto	mcg		
	milrinone	IV	mg	2.00	4.00
		Auto	mg	3.00	5.00
	MILRINONE INF	IV	mcg/kg/min	4.00	
		Auto	mcg	10.00	

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
	NOREPI INF	IV	ug/kg/min	0.20	1.00
		Auto	ug	0.40	2.00
	norepinephrine	IV	ug	0.05	0.10
		Auto	ug	0.15	0.20
Local Anesthetic					
	BUPIV 0.1 + FENT 2.0	EPID	ml/hour	10.00	30.00
		Auto	mg	20.00	40.00
	BUPIV 0.1 + FENT 5.0	EPID	ml/hour	10.00	30.00
		Auto	mg	20.00	40.00
	bupiv 0.25% plain	EPID	ml	5.00	15.00
		Auto	ml	10.00	20.00
	bupiv 0.50% plain	EPID	ml	5.00	15.00
		Auto	ml	10.00	20.00
	bupiv 0.75% plain	EPID	ml	5.00	15.00
		Auto	ml	10.00	20.00
	bupiv hyperbaric	SAB	mg	7.50	13.50
		Auto	mg	12.00	15.00
	bupiv hypobaric	SAB	mg	7.50	13.50

Drug Group Name	Name	Route / Total Type	Unit / Totaling Units	Default Dosage 1 / Default Dosage 2	Default Dosage 3 / Default Dosage 4
		Auto	mg	12.00	15.00
	BUPIV INF	EPID	ml/hour	10.00	30.00
		Auto	mg	20.00	40.00
	bupiv w/epi 1:200K	EPID	ml	5.00	15.00
		Auto	ml	10.00	20.00
	bupiv w/epi 1:400K	EPID	ml	5.00	15.00
		Auto	ml	10.00	20.00
	cetacaine spray	TOP	puffs	1.00	4.00
		Auto	puffs	2.00	8.00
	chloroproc 2% plain	EPID	ml	5.00	15.00
		Auto	ml	10.00	20.00
	chloroproc 2% w/epi	EPID	ml	5.00	15.00
		Auto	ml	10.00	20.00
	chloroproc 3% plain	EPID	ml	5.00	15.00
		Auto	ml	10.00	20.00
	chloroproc 3% w/epi	EPID	ml	5.00	10.00
		Auto	ml	15.00	20.00

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
	cocaine 4%	TOP	ml	1.00	3.00
		Auto	ml	2.00	4.00
	EMLA cream	TOP	gm	1.00	5.00
		Auto	gm	2.50	10.00
	EMLA disc	TOP	gm	1.00	
		Auto	gm		
	lido 1% w/Epi 1:200K	EPID	ml	5.00	15.00
		Auto	ml	10.00	20.00
	lido 1.5% w/Epi	EPID	ml	5.00	15.00
		Auto	ml	10.00	20.00
	lido 2% w/Epi 1:200K	EPID	ml	5.00	15.00
		Auto	ml	10.00	20.00
	lido 4% LTA	LTA	ml	4.00	
		Auto	ml		
	lido 4% topical	TOP	ml	1.00	3.00
		Auto	ml	2.00	4.00
	lido 5% hyperbaric	SAB	mg	50.00	75.00

Drug Group Name	Name	Route / Total Type	Unit / Totaling Units	Default Dosage 1 / Default Dosage 2	Default Dosage 3 / Default Dosage 4
		Auto	mg	60.00	100.00
	lidocaine 1% plain	EPID	ml	5.00	
		Auto	ml	10.00	
	lidocaine 1.5% plain	EPID	ml	5.00	
		Auto	ml	10.00	
	lidocaine 2% plain	EPID	ml	5.00	15.00
		Auto	ml	10.00	20.00
	mepiv 1% plain	EPID	ml		
		Auto	ml		
	mepiv 1%w/epi 1:400K	EPID	ml	200.00	450.00
		Auto	ml	300.00	600.00
	mepiv 2% plain	EPID	ml		
		Auto	ml		
	mepiv plain	SC	mg	200.00	450.00
		Auto	mg	300.00	600.00
	mepivacaine	EPID	ml	10.00	20.00
		Auto	ml	15.00	

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
	Other LA EPI Bolus	EPID	ml		
		Auto	ml		
	OTHER LA EPI INF	EPID	ml/hour	2.00	10.00
		Auto	ml	5.00	15.00
	Other LA SAB	SAB	mg		
		Auto	mg		
	ropiv 0.1+epi 1:200K	SC	ml	100.00	200.00
		Auto	mg	150.00	
	ropiv 0.1+epi 1:400K	EPID	ml		
		Auto	ml		
	ROPIV 0.1+FENT 2 ug	EPID	ml/hour		
		Auto	ml		
	ropivicane pf .2%	EPID	ml	5.00	20.00
		Auto	ml	10.00	
	ROPIVICANE pf INF.1%	EPID	ml/hour	10.00	20.00
		Auto	ml	15.00	
	tetracaine	SAB	mg	10.00	20.00

Drug Group Name	Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Units	Default Dosage 2	Default Dosage 4
		Auto	mg	15.00	
Musc Relax					
	atracurium	IV	mg	30.00	100.00
		Auto	mg	50.00	
	cisatracurium	IV	mg	2.00	6.00
		Auto	mg	4.00	8.00
	CISATRACURIUM INF	IV	ug/kg/min	1.00	3.00
		Auto	ug	2.00	
	doxacurium	IV	mg	2.00	4.00
		Auto	mg	3.50	5.00
	mivacurium	IV	mg	10.00	14.00
		Auto	mg	12.00	16.00
	MIVACURIUM INF	IV	mcg/kg/min	4.00	
		Auto	mcg	10.00	
	pancuronium	IV	mg	1.00	5.00
		Auto	mg	2.00	10.00
	rocuronium	IV	mg	10.00	30.00
		Auto	mg	25.00	50.00

Drug Group Name	Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Units	Default Dosage 2	Default Dosage 4
	ROCURONIUM INF	IV	ug/kg/min	10.00	
		Auto	ug	12.00	
	succinylcholine	IV	mg	60.00	100.00
		Auto	mg	80.00	
	vecuronium	IV	mg	2.00	6.00
		Auto	mg	4.00	8.00
	VECURONIUM INF	IV	ug/kg/min	0.80	
		Auto	ug	1.20	
Narcotics					
	alfentanil	IV	ug	250.00	1,000.00
		Auto	ug	500.00	2,000.00
	butorphanol	IV	mg	2.00	
		Auto	mg	4.00	
	fentanyl	IV	ug	25.00	100.00
		Auto	ug	50.00	
	FENTANYL INF	IV	ug/kg/min	0.30	9.00
		Auto	ug	0.40	15.00

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
	fentanyl transderm	TOP	mcg	2.50	7.50
		Auto	mcg	5.00	10.00
	hydromorphone	IV	mg	0.50	2.00
		Auto	mg	1.00	
	meperidine	IV	mg	25.00	75.00
		Auto	mg	50.00	100.00
	methadone	IV	mg	5.00	
		Auto	mg	10.00	
	morphine	IV	mg	2.50	10.00
		Auto	mg	5.00	
	morphine PF SAB	SAB	mg/hr	0.25	
		Auto	mg	0.50	
	morphine PF EPIDURAL	EPID	mg	2.50	
		Auto	mg	5.00	
	nalbuphine	IV	mg	2.50	10.00
		Auto	mg	5.00	
	remifentanil	IV	mcg	25.00	75.00

Drug Group Name	Name	Route / Total Type	Unit / Totaling Units	Default Dosage 1 / Default Dosage 2	Default Dosage 3 / Default Dosage 4
		Auto	mcg	50.00	
	REMIFENTANIL INF	IV	ug/kg/min	0.10	0.40
		Auto	ug	0.25	1.00
	sufentanil	IV	ug	10.00	75.00
		Auto	ug	25.00	150.00
	SUFENTANIL INF	IV	ug/kg/min		
		Auto	ug		
OB					
	carboprost(hemabate)	IM	mcg	250.00	
		Auto	mcg		
	dihydroergatamine	IV	mg	1.00	
		Auto	mg		
	ergonovine	IV	mg	0.20	
		Auto	mg		
	estradiol transderm	TOP	mg	0.05	0.10
		Auto	mg	0.08	
	estrogen	IV	mg	25.00	

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
		Auto	mg		
	medroxprogesterone	IM	mg	150.00	
		Auto	mg		
	methylergonovine	IM	mg	0.20	
		Auto	mg		
	oxytocin	IV	mg	10.00	
		Auto	mg	20.00	
	OXYTOCIN INF	IV	units/hr	2.00	
		Auto	units	5.00	
	terbutaline	IV	mg	0.25	
		Auto	mg		
Other					
	acetazolamide	IV	--		
		Auto	--		
	amphotericin B	IV	mg		
		Auto	mg		
	amrinone	IV	mg		

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
		Auto	mg		
	aspirin	PO	mg		
		Auto	mg		
	benzocaine	TOP	mg		
		Auto	mg		
	bupivacaine	EPID	mg	5.00	10.00
		Auto	mg	15.00	20.00
	caffeine w/Na benz	IV	mg	121.25	
		Auto	mg		
	caproic acid	IV	--		
		Auto	--		
	captopril	PO	mg	12.50	25.00
		Auto	mg		
	carbachol	IV	--		
		Auto	--		
	cefoperazone	IV	mg	500.00	1,000.00

Drug Group Name	Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Units	Default Dosage 2	Default Dosage 4
		Auto	mg		
	cephapirin	IV	mg	500.00	1,000.00
		Auto	mg		
	cetrimide	IV	--		
		Auto	--		
	chlorhexidine	TOP	mg		
		Auto	mg		
	chlorpheniramine	PO	--	2.00	4.00
		Auto	--		
	chlorpromazine	IV	mg	5.00	25.00
		Auto	mg	10.00	50.00
	chymotrypsin	IV	--		
		Auto	--		
	cortisone	IV	--		
		Auto	--		
	curare	IV	mg	5.00	15.00

Drug Group Name	Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Units	Default Dosage 2	Default Dosage 4
		Auto	mg	10.00	20.00
	cyclizin	IV	--		
		Auto	--		
	cyclopentolate	IV	mg		
		Auto	mg		
	cyclosporine	IV	mg		
		Auto	mg		
	dantrolene	IV	mg	175.00	500.00
		Auto	mg	250.00	1,000.00
	ddavp nasal spray	NAS	mcg	10.00	30.00
		Auto	mcg	20.00	40.00
	desmopressin	IV	mg	21.00	15.00
		Auto	mg	25.00	
	dextrose 50%	IV	ml	10.00	50.00
		Auto	ml	25.00	
	dezocine	IV	--		

Drug Group Name	Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Units	Default Dosage 2	Default Dosage 4
		Auto	--		
	diazepam supp	PR	mg	2.50	10.00
		Auto	mg	5.00	20.00
	diazoxide	IV	--		
		Auto	--		
	doxapram	IV	mg	20.00	60.00
		Auto	mg	40.00	80.00
	epoprostenol	IV	ug/kg/min	0.00	
		Auto	ug	0.00	
	epsalon acid	IV	--		
		Auto	--		
	ethyl chloride	TOP	puffs	1.00	3.00
		Auto	puffs	2.00	4.00
	etid w/epi 1:200K	IV	mg	150.00	400.00
		Auto	mg	300.00	
	etidocaine plain	LTA	mg		
		Auto	mg		

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
	FENOLDEPAM INF	IV	ug/kg/min	0.03	1.60
		Auto	ug	1.00	
	fenoterol	IV	--		
		Auto	--		
	flecainide	IV	mg		
		Auto	mg		
	flurazepam	IV	mg		
		Auto	mg		
	fusidic acid	IV	mg		
		Auto	mg		
	gallamine	IV	mg		
		Auto	mg		
	glucagon	IV	mg	0.50	
		Auto	mg	1.00	
	gramicidin	IV	mg		
		Auto	mg		

Drug Group Name	Name	Route / Total Type	Unit / Totaling Units	Default Dosage 1 / Default Dosage 2	Default Dosage 3 / Default Dosage 4
	heparin sodium	IV	units	1,000.00	2,000.00
		Auto	units	5,000.00	7,500.00
	hetastarch	IV	ml	500.00	
		Auto	ml		
	hexetidine	IV	--		
		Auto	--		
	hyaluronidase	IV	--		
		Auto	--		
	hypotears ointment	TOP	drops	1.00	
		Auto	drops	2.00	
	ibuprofen	PO	mg	200.00	600.00
		Auto	mg	400.00	800.00
	indigo carmine	IV	ml	1.00	5.00
		Auto	ml	2.00	10.00
	indigotindisulfonate	IV	ml		
		Auto	ml		
	insulin 70/30	SC	units		

Drug Group Name	Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Units	Default Dosage 2	Default Dosage 4
		Auto	units		
	INSULIN INF	IV	units/hr		
		Auto	units		
	insulin LENTE	SC	units		
		Auto	units		
	insulin NPH	SC	units		
		Auto	units		
	insulin REG	SC	units		
		Auto	units		
	insulin ULTRALENTE	SC	units		
		Auto	units		
	ipratropium bromide	IV	--		
		Auto	--		
	lido plain	EPID	mg	50.00	100.00
		Auto	mg	75.00	200.00
	lido w/epi 1:200K	EPID	mg	50.00	100.00
		Auto	mg	75.00	200.00

Drug Group Name	Name	Route / Total Type	Unit / Totaling Units	Default Dosage 1 / Default Dosage 2	Default Dosage 3 / Default Dosage 4
	lido w/epi 1:400K	EPID	mg	50.00	100.00
		Auto	mg	75.00	200.00
	LIDOCAINE INF	EPID	mg/hr		
		Auto	mg		
	lincomycin	IV	mg		
		Auto	mg		
	MAGNESIUM INF	IV	ml/min	1.00	3.00
		Auto	ml	2.00	
	magnesium sulfate	IV	gm	1.00	15.00
		Auto	gm	2.00	30.00
	mephentermine	IV	mg		
		Auto	mg		
	metaraminol	IV	--		
		Auto	--		
	METHOHEX INF	IV	mcg/kg/min	25.00	
		Auto	mcg	50.00	
	methoxamine	IV	mg	3.00	

Drug Group Name	Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Units	Default Dosage 2	Default Dosage 4
		Auto	mg	5.00	
	methyldopa	IV	mg	125.00	250.00
		Auto	mg	500.00	
	methylene blue	IV	ml	5.00	
		Auto	ml	10.00	
	metocurine	IV	mg		
		Auto	mg		
	MIDAZOLAM INF	IV	mg/hr	0.30	
		Auto	mcg	1.50	
	MORPHINE INF	IV	mg/hr	5.00	15.00
		Auto	mg	10.00	
	MORPHINE PF INF	IV	mg/hr	0.10	
		Auto	mg	0.20	
	multivitamin	IV	ml	10.00	
		Auto	ml		
	naproxen	IV	mg		
		Auto	mg		

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
	nifedipine	SL	mg	10.00	
		Auto	mg	20.00	
	OCTREOTIDE INF	IV	ug/kg/min		
		Auto	ug		
	OKT 3	IV	mg		
		Auto	mg		
	oxymetazoline spray	NAS	puffs	1.00	3.00
		Auto	puffs	2.00	4.00
	oxymorphone	IV	--	0.50	1.00
		Auto	--	2.00	
	oxytoc	IV	--	20.00	30.00
		Auto	--	40.00	
	pentazocine	IV	--		
		Auto	--		
	perphenazine	IV	--		
		Auto	--		
	phytonadione	IV	mg		

Drug Group Name	Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Units	Default Dosage 2	Default Dosage 4
		Auto	mg		
	pipecuronium	IV	mg		
		Auto	mg		
	potassium chloride	IV	--	20.00	40.00
		Auto	--	60.00	80.00
	POTASSIUM INF	IV	mg/hr	20.00	60.00
		Auto	mg	40.00	80.00
	povidone iodine	IV	mg		
		Auto	mg		
	prilocaine	IV	mg		
		Auto	mg		
	procaine	IV	mg		
		Auto	mg		
	promazine	IV	--		
		Auto	--		
	proparacaine	IV	mg		
		Auto	mg		

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
	quinidine	IV	mg	300.00	750.00
		Auto	mg	500.00	
	RhoGAM	IM	mcg	300.00	
		Auto	mcg		
	ritodrine	IV	mg		
		Auto	mg		
	ROPIV INF	EPID	mg/hr	10.00	
		Auto	mg	20.00	
	ropiv plain	SC	mg	100.00	200.00
		Auto	mg	150.00	
	ROPIV.1% +2mcg/FENT	EPID	ml/hour	10.00	20.00
		Auto	ml	15.00	
	secobarbital	IV	mg	100.00	
		Auto	mg		
	secretin	IV	mg	10.00	
		Auto	mg	75.00	
	sodium bicarbonate	IV	mg	25.00	

Drug Group Name	Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Units	Default Dosage 2	Default Dosage 4
		Auto	mg	50.00	
	sodium chloride	IV	--	350.00	500.00
		Auto	--	1,000.00	
	sodium citrate	IV	ml		
		Auto	ml		
	SUX INF	IV	mcg	0.50	10.00
		Auto	mcg	1.00	
	thiamine	IV	mg	100.00	
		Auto	mg		
	tranexamic acid	IV	mg	200.00	
		Auto	mg	300.00	
	TRANEXAMIC INF	IV	mg/hr		
		Auto	mg		
	triamcinolone	IV	--		
		Auto	--		
	trifluoperazine	IV	--		
		Auto	--		

Drug Group Name	Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Units	Default Dosage 2	Default Dosage 4
	trimethaphan	IV	mg		
		Auto	mg		
	tropicamide	IV	mg		
		Auto	mg		
	trovafloxacin	IV	mg	200.00	
		Auto	mg	300.00	
	tubocurarine	IV	mg	3.00	6.00
		Auto	mg		
	vasopressin	IV	--		
		Auto	--		
	vitamin K	IV	mg	1.00	5.00
		Auto	mg	2.00	10.00
	wafarin sodium	PO	mg		
		Auto	mg		
	zTrash1	SC	mg	200	450
		Auto	mg	300	600
	zTrash3	SAB	mg	50	100
		Auto	mg	75	

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
	zTrash4	EPID	mg	5.00	15.00
		Auto	mg	10.00	20.00
Reversal					
	edrophonium	IV	mg	10.00	20.00
		Auto	mg	15.00	30.00
	flumazenil	IV	mg	0.20	0.60
		Auto	mg	0.40	
	naloxone	IV	mg	0.04	0.20
		Auto	mg	0.10	0.40
	NALOXONE INF	IV	ug/kg/min		
		Auto	ug		
	neostigmine	IV	mg	2.50	4.00
		Auto	mg	3.00	5.00
	physostigmine	IV	mg	0.50	2.00
		Auto	mg	1.00	
	pyridostigmine	IV	mg	10.00	
		Auto	mg	20.00	

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
Sedative					
	chlordiazepoxide	IV	mg	50.00	
		Auto	mg	100.00	
	diazepam	IV	mg	5.00	10.00
		Auto	mg	2.50	
	haloperidol	IM	mg	2.00	
		Auto	mg	5.00	
	lorazepam	IV	mg	0.50	1.50
		Auto	mg	1.00	2.00
	LORAZEPAM INF	IV	mcg/kg/min		
		Auto	mcg		
	midazolam	IV	mg	1.00	5.00
		Auto	mg	2.00	
	midazolam po	PO	mg		
		Auto	mg		
Steroids					
	dexamethasone	IV	mg	2.00	8.00
		Auto	mg	4.00	16.00

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
	hydrocortisone	IV	mg	25.00	100.00
		Auto	mg	50.00	
	methylprednisolone	IV	mg	40.00	1,000.00
		Auto	mg	125.00	
Vasodilator					
	enalapril	IV	--		
		Auto	--		
	enalaprilat	IV	mg	1.25	
		Auto	mg		
	hydralazine	IV	mg	5.00	20.00
		Auto	mg	10.00	
	ISOSORBIDE INF	IV	mcg/kg/min		
		Auto	mcg		
	nitroglycerin	IV	ug/kg/min		
		Auto	mg		
	nitroglycerine paste	TOP	mg	7.50	30.00
		Auto	mg	15.00	

Drug Group Name	Name	Route Total Type	Unit Totaling Units	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
	nitroglycerine spray	SL	mg	0.40	
		Auto	mg	0.80	
	NITROPRUSS INF	IV	ug/kg/min	0.50	2.00
		Auto	ug	1.00	8.00
	papaverine	IV	mg	30.00	
		Auto	mg		
	phentolamine	IV	mg/kg/min		
		Auto	mg		
	sodium nitroprusside	IV	ug/kg/min	1.00	2.00
		Auto	ug	3.00	

Event List		
Event Group	**Event**	**Milestone**
Airway		
	Airway maintained by head extension, neck flexion and chin lift	
	Assisted ventilation	
	Atraumatic intubation	
	Atraumatic intubation, bilateral breath sounds, CO2 confirmed, endotracheal tube taped and secured	
	Auscultatory confirmation of correct placement of double lumen ETT	
	Awake fiberoptic intubation	
	Blind nasal intubation	
	Controlled ventilation	
	Cuffed ETT, size	
	Deep extubation, spontaneous ventilation present	
	Difficult airway - completely obstructed despite all non-invasive attempts at support	
	Difficult airway - patient allowed to awaken. Remarks	
	Difficult airway - proceed to emergeny tracheostomy	
	Difficult airway - proceed to endotracheal intubation	
	Difficult airway - proceed to LMA insertion	
	Difficult airway, partially obstructed despite full supportive measures	
	Difficult fiberoptic intubation, reason:	
	Difficult intubation	
	Difficult intubation - reason	
	Difficult LMA insertion, reason:	
	Double lumen ETT, LEFT, size	
	Double lumen ETT, RIGHT, size	
	ETT suctioned, cuff deflated, trachea extubated, spontaneous ventilation present	
	Failed intubation	
	Failed LMA insertion, reason:	
	Fiberoptic confirmation of correct placement of double lumen ETT	
	Grade I atraumatic intubation with direct visualization of cords, bilateral breath sounds, CO2 confirmed, endotracheal tube taped and secured.	
	Grade II atraumatic intubation with direct visualization of arytenoids, bliateral breath sounds, CO2 confirmed, endotracheal tube taped and secured.	
	Grade III intubation, epiglottis seen, no other laryngeal structures visible, intubation successful, bilateral breath sounds, CO2 confirmed, tube taped and secured.	
	Grade IV difficult intubation - no epiglottis or laryngeal structures seen, intubation successful, bilateral breath sounds, CO2 confirmed, tube taped and secured	

Event Group	Event	Milestone
	Guide used for intubation	
	Heine blade, size:	
	Intubating LMA used:	
	Intubation attempts X	
	Jet ventilator used via operating laryngoscope	
	LASER ETT, size	
	Light wand used for intubation	
	LMA inserted, unobstructed airway, size:	
	LTA used:	
	Macintosh blade, size:	
	Mask anesthetic, spontaneous breathing, unobstructed airway	
	Mask anesthetic. oral airway in place, airway maintained	
	Mask induction	
	Miller blade, size:	
	Nasal airway, lubricated and inserted.	
	Nasal ETT, cuffed, size	
	Nasal ETT, uncuffed, size	
	Nasotracheal fiberoptic intubation, scope passed through cords, carina visualized, ETT passed over scope	
	Oral airway inserted	
	Oral fiberoptic intubation, scope passed through cords, carina visualized, ETT passed over scope	
	Other airway notes:	
	Patient transported to ICU intubated	
	Patient transported to nursing unit with tracheostomy in place, clear airway present.	
	Patient transported to PACU intubated.	
	Positive pressure assist, spontaneous ventilation	
	Positive pressure ventilation via mask, unobstructed airway	
	Preoxygenated by mask	
	RAE cuffed ETT, size	
	RAE uncuffed ETT, size	
	Smooth oral intubation, 3.0 MAC, Tube 7.0	
	Smooth oral intubation, 3.0 MAC, Tube 7.5	
	Smooth oral intubation, 3.0 MAC, Tube 8.0	
	Smooth oral intubation, 3.0 MAC, Tube 8.5	
	Smooth oral intubation, 4.0 MAC, Tube 7.0	
	Smooth oral intubation, 4.0 MAC, Tube 7.5	
	Smooth oral intubation, 4.0 MAC, Tube 8.0	
	Smooth oral intubation, 4.0 MAC, Tube 8.5	
	Spontaneous breathing oxygen via face mask, unobstructed airway	
	Spontaneous breathing, partially obstructed, airway maintained	
	Spontaneous breathing, unobstructed airway	
	Spontaneous ventilation	
	Stylet used	

Event Group	Event	Milestone
	Superior laryngeal nerve block	
	Topical anesthetic to oropharynx	
	Transtracheal injection of local anesthetic:	
	Transtracheal jet ventilation used, Sanders insufflator	
	Traumatic intubation	
	Tube secured, cm:	
	Uncuffed ETT, size	
	Univent tube, size	
	Wire reinforced, cuffed ETT, size	
Anxiety		
	1.D:Anxiety	
	A:Anxiety	
	R:Anxiety	
Arrhythmias		
	1.D:Arrhythmias	
	1.D:Arrhythmias: Brachycardia	
	1.D:Arrhythmias: PVC's	
	1.D:Arrhythmias: Tachycardia	
	A:Arrhythmias	
	R:Arrhythmias	
Artifact		
	Artifact, agent concentration	
	Artifact, arterial line	
	Artifact, CVP	
	Artifact, EKG	
	Artifact, NIBP	
	Artifact, PAP	
	Artifact, pulse oximeter	
	Artifact, temperature	
	Artifact, unspecified	
	Artifact, ventilator parameter	
Breathing/Airway		
	1.D:Airway	
	1.D:Airway: Ineffective Airway	
	1.D:Breathing	
	1.D:Breathing: Desaturation	
	A:Breathing/Airway	
	A:Breathing/Airway: Applied O2	
	A:Breathing/Airway: Bag Value/Mask	
	A:Breathing/Airway: Intubated	
	R:Breathing/Airway	
Cardiac		

Event Group	Event	Milestone
	Cardiologist present in OR to review TEE exam:	
	TEE bite block used	
	TEE probe placed atraumatically; documentation written in	
	patient's chart and exam taped.	
	TEE probe placed under direct vision.	
	TEE probe placement, passed atraumatically	
Education		
	1.D:Education	
	1.D:Education: Deep breathe, coughing	
	1.D:Education: Discharge teaching	
	1.D:Education:Pain management	
	A:Education	
	R:Education	
Eqpt/Monitors		
	BAIR Hugger	
	Esophageal stethoscope inserted.	
	Fluid Warmer	
	Nasogastric tube, size:	
	Orogastric tube, size:	
	Syringe pump	
	Warming Mattress. Temp:	
Hemodynamic Status		
	1.D:Bleeding	
	1.D:Hemodynamic Status	
	1.D:Hemodynamic Status: Hypertension	
	1.D:Hemodynamic Status: Hypotension	
	A:Bleeding	
	A:Hemodynamic Status	
	R:Bleeding	
	R:Hemodynamic Status	
IV Access		
	1.D:IV Access	
	A:IV Access	
	R:IV Access	
IVs		
	PIV Left ankle, size	
	PIV Left antecubital, size	
	PIV Left EJ, size	
	PIV Left foot, size	
	PIV Left forearm, size	
	PIV Left hand, size	
	PIV Left leg, size	

Event Group	Event	Milestone
	PIV Left wrist, size	
	PIV place in Holding Room per nursing documentation	
	PIV placed, remarks	
	PIV Right ankle, size	
	PIV Right antecubital, size	
	PIV Right EJ, size	
	PIV Right foot, size	
	PIV Right forearm, size	
	PIV Right hand, size	
	PIV Right leg, size	
	PIV Right wrist, size	
Lines		
	8 Fr Pulmonary angiography catheter inserted via Swan introducer,	
	floated into RV, pulled back to RA	
	Arterial Line 20 ga. LEFTradial artery	
	Arterial line 20 ga. RIGHTradial artery	
	Arterial line LEFT axillary artery, size:	
	Arterial line LEFT brachial artery	
	Arterial line LEFT dorsalis pedis artery	
	Arterial line LEFT femoral artery	
	Arterial line LEFT radial artery, size:	
	Arterial line RIGHT axillary artery, size:	
	Arterial line RIGHT brachial artery	
	Arterial line RIGHT dorsalis pedis artery	
	Arterial line RIGHT femoral artery	
	Arterial line RIGHT radial artery, size:	
	Central line 7 Fr 2 lumen, location:	
	Central line 7 Fr 3 lumen, location:	
	Central line, 14 ga catheter, location:	
	Central line, 9 Fr Swan introducer, location:	
	SLIC catheter placed through Swan introducer	
	Swan Ganz, Oximetrix, LEFT IJ	
	Swan Ganz, Oximetrix, LEFT subclavian	
	Swan Ganz, Oximetrix, location:	
	Swan Ganz, Oximetrix, RIGHT IJ	
	Swan Ganz, Oximetrix, RIGHT subclavian	
	Swan Ganz, Thermodilution, LEFT IJ	
	Swan Ganz, Thermodilution, LEFT subclavian	
	Swan Ganz, Thermodilution, location:	
	Swan Ganz, Thermodilution, RIGHT IJ	
	Swan Ganz, Thermodilution, RIGHT subclavian	
MD Notifications		
	1.D:EKG	
	1.D:Labs	
	1.D:X-Ray	

Event Group	Event	Milestone
	A:EKG interpretated by	
	A:Labs	
	A:X-Ray interpretated by	
	R: Labs	
	R:EKG	
	R:X-Ray	
Nausea/Vomiting		
	1.D: N/V: Multiple episodes of vomiting	
	1.D:N/V	
	1.D:N/V: Actively vomiting	
	1.D:N/V: C/O nausea	
	1.D:N/V:Dry heaves	
	A:N/V	
	A:N/V: Medicated- see drugs	
	R:N/V	
	R:N/V: Nausea improved	
	R:N/V: No more emesis	
Neuro		
	Precordial Doppler affixed to chest	
	Prone position: after airway secured, patient logrolled into	
	position on supports with pressure points carefully padded,	
	peripheral nerves protected, pulses checked and down eye and	
	ear OK	
	Sitting position: head fixed in head rest per surgeon, patient	
	moved into position slowly with careful monitoring of vital signs,	
	peripheral nerves protected, pulses checked, monitoring devices	
	including precordial Doppler affixed and functional.	
Obstetric		
	Emergency C/Section, patient pre-oxygenated via face mask, rapid	
	sequence induction with cricoid pressure, ETT placed under direct	
	vision, cuff inflated, taped and secured.	
Other		
	1.D	
	A	
	R	
PACU/Transport		
	PACU Vital Signs: BP, P, R, SpO2, Temp	
	Report given to PACU/ICU nurse	
	Spontaneous airway without obstruction in PACU	
	Suctioned + extubated in OR, stable airway in PACU.	
	Suctioned + extubated in PACU, stable airway in PACU.	
	Transported to PACU per OR nursing documentation.	

Event Group	Event	Milestone
Pain		
	1.D:Pain: C/O pain	
	1.D:Pain: Crying	
	A:Pain	
	R:Pain	
Pediatric	No Defaults	
Positioning	Patient positioned	
	Patient positioned Flexion, arms carefully positioned, pulses unchanged and peripheral nerves protected	
	Patient positioned Jack Knife, arms carefully positioned, pulses unchanged and peripheral nerves protected	
	Patient positioned Kidney rest up, arms carefully positioned, pulses unchanged and peripheral nerves protected	
	Patient positioned Left Lateral, arms carefully positioned, pulses unchanged and peripheral nerves protected	
	Patient positioned Lithotomy, arms carefully positioned, pulses unchanged and peripheral nerves protected	
	Patient positioned Prone, arms carefully positioned, pulses unchanged and peripheral nerves protected	
	Patient positioned Reverse Trendelenburg, arms carefully positioned, pulses unchanged and peripheral nerves protected	
	Patient positioned Right Lateral, arms carefully positioned, pulses unchanged and peripheral nerves protected	
	Patient positioned Sitting, arms carefully positioned, pulses unchanged and peripheral nerves protected	
	Patient positioned Supine, arms carefully positioned, pulses unchanged and peripheral nerves protected	
	Patient positioned Trendelenburg, arms carefully positioned, pulses unchanged and peripheral nerves protected	
	Patient returned to Supine, arms carefully positioned, pulses unchanged and peripheral nerves protected	
	Positioning per OR nursing documentation	
Regional		
	Anesthetic induction	
	Ankle block, LEFT, local anesthetic injected:	
	Ankle block, RIGHT, local anesthetic injected:	
	Axillary block, nerve identified by nerve stimulator, local anesthetic injected:	
	Axillary block, nerve identified by paresthesia, local anesthetic injected:	
	Axillary block, transarterial technique, local anesthetic injected:	
	Bier block, LEFT ARM, IV catheter placed, limb exsanguinated, proximal tourniquet inflated, local anesthetic injected	
	Bier block, RIGHT ARM, IV catheter placed, limb exsanguinated, proximal tourniquet inflated, local anesthetic injected:	

Event Group	Event	Milestone
	Blood obtained on placement of epidural.	
	Bloody tap for SAB	
	Continuous caudal, skin prepped, 17 ga. Tuohy needle, no paresthesias, no blood, no CSF identified, catheter threaded and secured, location:	
	Continuous epidural:	
	Continuous lumbar epidural, skin prepped, 17 ga. Tuohy needle, no paresthesias, no blood, no CSF identified, catheter threaded and secured, location:	
	Continuous SAB, 17 ga. Tuohy needle, catheter threaded, location:	
	Continuous SAB:	
	Continuous thoracic epidural, skin prepped, 17 ga. Tuohy needle, no paresthesias, no blood, no CSF identified, catheter threaded and secured, location:	
	CPR Started	
	Critical Care Panel results reviewed	
	CSF identified on placement of epidural needle, catheter threaded into subarachnoid space, used as continuous SAB, location:	
	CSF identified on placement of epidural needle.	
	Direct visualization of cords, ETT secured, eyes lubed and taped	
	Femoral nerve block, nerve identified by nerve stimulator, local anesthetic injected:	
	Femoral nerve block, nerve identified by paresthesia, local anesthetic injected:	
	Interscalene block, LEFT, local anesthetic injected:	
	Interscalene block, RIGHT, local anesthetic injected:	
	Intraarticular block, knee, LEFT, local anesthetic injected:	
	Intraarticular block, knee, RIGHT, local anesthetic injected:	
	Limbs padded and placed <90 degrees	
	NPO status checked and deemed appropriate to proceed.	
	Other Drug	
	Other Event	
	Other Fluid	
	Other Gas	
	Other Lab:	
	Paresthesia identified on placement of needle:	
	Patient identified, anesthesia machine and monitors checked.	
	Patient identified, chart reviewed, monitors applied, and pre-oxy	
	Patient suctioned & extubated on exhale/cough	
	Patient to PACU, vital signs stable	
	Peripheral nerve block:	
	Positive ET CO2, bilateral breath sounds equal	
	Record signed; Outcomes completed?	
	Re-evaluation immediately prior to induction	
	Regional procedure abandoned	

Event Group	Event	Milestone
	Relief by	
	Responsible party interviewed and patient examined, anesthetic plan discussed, chart and consents reviewed prior to entry to OR.	
	Routine monitors applied: ECG, NIBP, SpO2	
	SAB:	
	Single shot epidural, no paresthesias, no blood, no CSF identified, local anesthetic injected, location:	
	Single shot epidural:	
	Subarachnoid block, 22 ga. needle, clear CSF, no paresthesias, local anesthetic injected, location:	
	Subarachnoid block, 25 ga. Whitacre needle, clear CSF, no paresthesias, local anesthetic injected, location:	
Renal Status		
	1.D: Oliguria	
	1.D:Low urinary output	
	1.D:Low urinary output: Unable to void	
	A:Low urinary output	
	A:Low urinary output: MD notified, straight cathed	
	A:Oliguria	
	R:Low urinary output	
	R:Oliguria	
Start/Stop Times		
	End of Anesthesia Care	
	End of Anesthesia Delivery	
	End of Printed Anesthesia Record	
	End of Printed Holding Record	
	End of Printed Post-Op Record	
	End of Surgery	
	Patient enters OR	
	Patient exits OR	
	Pre-use Checkout	
	Scheduled Case End	
	Scheduled Case Start	
	Start of Anesthesia Care	
	Start of Anesthesia Delivery	
	Start of Printed Anesthesia Record	
	Start of Printed Holding Record	
	Start of Printed Post-Op Record	
	Start of Surgery	
Temperature		
	1.D:Temperature	
	1.D:Temperature: Hyperthermic	
	1.D:Temperature: Hypothermic	
	A:Temperature	
	R:Temperature	

Fluid/Gas List

Fluid/Gas Group Name	Fluid/Gas Name	Route Total Type	Unit Totaling Unit	Default Dosage 1 Default Dosage 2	Default Dosage 3 Default Dosage 4
Fluid In					
	Albumin 25%	IV	ml	50.00	
		Auto	ml		
	Albumin 5%	IV	ml	250.00	
		Auto	ml		
	Cell Saver Return	IV	ml		
		Auto	ml		
	Cryoprecipitate	IV	units		
		Auto	units		
	D5 Normosol-R	IV	ml	250.00	1,000.00
		Auto	ml	500.00	
	D5 Ringers Lactate	IV	ml	250.00	1,000.00
		Auto	ml	500.00	
	FFP	IV	ml		
		Auto	ml		

Fluid/Gas Group Name	Fluid/Gas Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Unit	Default Dosage 2	Default Dosage 4
	Hetastarch 6%	IV	ml	500.00	
		Auto	ml		
	IV Fluids per NICU record	IV	ml/hour		
		Auto	ml		
	Normal Saline	IV	ml	250.00	1,000.00
		Auto	ml	500.00	
	Normosol-M	IV	ml	250.00	1,000.00
		Auto	ml	500.00	
	Normosol-R	IV	ml	250.00	1,000.00
		Auto	ml	500.00	
	Pentaspane	IV	ml	250.00	
		Descending	ml	500.00	
	Plasmalyte	IV	ml		
		Descending	ml		
	Platelets	IV	units		
		Auto	units		

Fluid/Gas Group Name	Fluid/Gas Name	Route	Unit	Default Dosage 1	Default Dosage 3
		Total Type	Totaling Unit	Default Dosage 2	Default Dosage 4
	PRBC	IV	ml		
		Auto	ml		
	Ringers Lactate	IV	ml	250.00	1,000.00
		Auto	ml	500.00	
Fluid Out					
	Estimated Blood Loss		ml		
		Auto	ml		
	Nasogastric	NAS	ml		
		Auto	ml		
	Urine Output		ml		
		Auto	ml		
Gas In					
	Air	INH	L/min	0.50	2.00
		Auto	L	1.00	5.00
	Helium	INH	L/min		
		Auto	L		

				Default	Default
		Route	Unit	Dosage 1	Dosage 3
Fluid/Gas Group Name	Fluid/Gas Name	Total Type	Totaling Unit	Default Dosage 2	Default Dosage 4
	Nitrous Oxide	INH	L/min	1.00	3.00
		Auto	L	2.00	6.00
	Oxygen	INH	L/min	1.00	6.00
		Auto	L	3.00	10.00
Gas Out – No Defaults					

Insurers List

Insurer Name	Relative Value Time Unit	Relative Value Time Unit Cost
Medicare	0	
None	0	
Private	0	

Laboratory Items List

Lab Group	Lab Test	Abbreviation	Unit	Charge Code
Blood Bank				
	A\Rh	A\Rh	---	
	AB\Rh	AB\Rh	---	
	B\Rh	B\Rh	---	
	O\Rh	O\Rh	---	
CBC				
	HCT (F)	HCT (F)	%	
	HCT (M)	HCT (M)	%	
	MCH	MCH	pg	
	MCHC	MCHC	gm/dL	
	MCV (F)	MCV (F)	fL	
	MCV (M)	MCV (M)	fL	
	MPV	MPV	fL	
	Platelet Count	Plate nt	Thous/cu m	
	RBC (F)	RBC (F)	Mil/cu mm	
	RBC (M)	RBC (M)	Mil/cu mm	
	RDW	RDW	%	
	WBC	WBC	Thous/cu m	
Chemistries				
	Alb/Glob Ratio	Alb/Glob	---	
	Albumin	Albumin	g/dL	
	ALKP	ALKP	U/L	
	ALT	ALT	---	
	Amylase	Amylase	U/L	
	Anion Gap	Anion Gap	mEq/L	
	AST	AST	---	
	Bun	Bun	mg/dL	

Lab Group	Lab Test	Abbreviation	Unit	Charge Code
	Bun/Creatinine Ratio	Bun/Creat	---	
	Calcium	Calcium	mg/dL	
	Carbon Dioxide	CO2	mmol/L	
	Chloride	Chloride	mmol/L	
	Chol/HDL Ratio	Chol/HDL	---	
	Cholesterol	Chol	mg/dL	
	Cholesterol Percentile	Chol %	%	
	CK	CK	U/L	
	Creatinine	Creat	mg/dL	
	Digoxin	Digoxin	ng/mL	
	Direct Bilirubin	Bilurubin	mg/dL	
	GGT	GGT	mg/dL	
	Globulin	Globulin	U/L	
	Glucose	Glucose	mg/dL	
	HDL Cholesterol Calc.	HDL Chol	mg/dL	
	HGB (F)	HGB (F)	gm/dL	
	HGB (M)	HGB (M)	gm/dL	
	Iron	Iron	ug/dL	
	LD	LD	---	
	LDH	LDH	U/L	
	LDL Cholesterol Calc.	LDL Chol	mg/dL	
	Lipase	Lispase	U/L	
	Magnesium	Magnesium	mg/dL	
	Osmolality	Osmolality	mOsm/kg	
	Phenytoin	Phenytoin	mOsm/kg	
	Phosphorus	Phosphorus	mg/dL	
	Potassium	Potassium	mmol/L	
	Sodium	Sodium	mmol/L	
	Total Biliruben	Biliruben	mg/dL	
	Total Protein	Protein	g/dL	
	Triglycerides	Triglyceri	mg/dL	
	Urea Nitrogen	U Nitrogen	mg/dL	
	Uric Acid	Uric Acid	mg/dL	
	VLDL	VLDL	---	
Coagulation				
	ACT	ACT	sec	
	APTT	APTT	sec	
	Bleeding Time	Bleed Time	min	
	PT	PT	sec	
	Thrombin Time	Thrombin	sec	
Hematology				
	Bands	Bands	---	
	Baso	Baso	cu mm	
	Eos	Eos	cu mm	
	HCO2	HCO2	mEq/L	
	Lymph	Lymph	cu mm	
	Meta	Meta	cu mm	

Lab Group	Lab Test	Abbreviation	Unit	Charge Code
	Mono	Mono	cu mm	
	Myelo	Myelo	cu mm	
	O2SAT	O2SAT	%	
	p02 (Adults)	p02 A	mmHg	
	p02 (Over 65)	p02 (65)	mmHg	
	pC02	pC02	mmHg	
	pH	pH	mmHg	
	Segs	Segs	---	
	TCO2	TCO2	mmol/L	

Laboratory Unit List
Unit
%
---
cu mm
fL
g/dL
gm/dL
mEq/L
mg/dL
Mil/cu mm
min
mmHg
mmol/L
mOsm/kg
ng/mL
pg
sec
Thous/cu m
U/L
ug/dL

Locations
Location (These will be different for each customer)
Holding 1
Holding 2
ICU
NICU
OR 1
OR 2
OR 3
PACU
SICU

Outcomes		
	Airway	Neurological
	Cardiovascular	Regional
	Discharge Planning	Respiratory
	Miscellaneous	

Outcome Locations		
	Location	**Abbreviation**
(User Creates)		
	72 Hr after surgery	72hr
	Operating Room	OR
	Recovery Room	RR
	Same day surgery	SDS

Patient History List	
Patient History Group	**Patient History**
Allergies	
	PCN
	Morphine
	Codine
	Sulfa
	Corn Products
	Milk Products
	Bananas
	Latex
	Hay
	Ragweed
Anesthesia History	
	Malignant Hyperthermia
	Nausea
	Vomiting
	Difficulty Voiding Bowel
	Difficulty Voiding Bladder
	Difficult Airway
	Other
Family History	
	Diabetes
	Blood Disorders
	Arteriosclerosis
	Gout
	Coronary Artery Disease
	TB
	Cancer

Patient History Group	Patient History
	Hypertension
	Epilepsy
	Kidney Disease
	Other
Medical History	
	Diabetes
	Blood Disorders
	Arteriosclerosis
	Coronary Artery Disease
	TB
	Cancer
	Hypertension
	Epilepsy
	Kidney Disease
	Other
Medications	
	Accupril
	Monopril
	Vasotech
	Digitalis
	Lasix
	Nitroglycerine
	Inderal
	Ortho-Cyclen
	Ortho-Novum
	Ovocon
	Synthroid
	Estrogen
	Cortisone
	Insulin
	PCN
	Streptomycin
	Bactrim
	Tetracycline
	Augmentin
	Axid
	Zantac
	Maalox
	Mylanta
	Milk of Magnesia
	Cascara
	Lomotil
	Theophline
	Theolar
	Albuterol

Patient History Group	Patient History
	Diazapam
	Thorazine
	Dalmane
	Atarax
	Motrin
	Codine
	Demerol
	Morphine Sulphate
	Tylenol
Surgical History	
	Coronary Artery Bypass
	Hernia
	Appendix
	Gallbladder
	Tonsils
	Other

Patient Systems List	
Patient Systems	**Patient System Conditions**
Cardiovascular	
	ASHD
	Abnormal EKG
	Angina
	CHF
	Dysrhythmia
	Exercise Tolerance
	Hypertension
	MI
	Murmur
	Pacemaker
	Rheumatic Fever
	Valvular Disease
	Other Cardiovascular
Hepato/Gastrointestinal	
	Bowel Obstruction
	Cirrhosis
	Hepatitis/Jaundice
	Hiatal Hernia/Reflux
	Nausea & Vomiting

Patient Systems	Patient System Conditions
	Ulcers
	Other Hepato/Gastrointestinal
Neuro/Musculoskeletal	
	Arthritis
	Back Problems
	CVA/Stroke/TIAs
	DJD
	Headaches
	Loss of Consciousness
	Muscle Weakness
	Neuromuscular Disease
	Paralysis
	Paresthesia
	Seizures
	Syncope
	Other Neuro/Musculoskeletal
Other	
	Anemia
	Bleeding Tendencies
	Cancer
	Chemotherapy
	Dehydration
	Hemophilia
	Immunosuppressed
	Pregnancy
	Recent Steroids
	Sickle Cell Disease/Trait
	Transfusion History
	Other
Renal/Endocrine	
	Diabetes
	Renal Failure/Dialysis
	Thyroid Disease
	Urinary Retention
	Urinary Tract Infection
	Weight Loss/Gain
	Other Renal/Endocrine
Respiratory	
	Asthma
	Bronchitis
	COPD
	Dyspnea
	Orthopnea
	Pneumonia

Patient Systems	Patient System Conditions
	Productive Cough
	Recent URI
	SOB
	Tuberculosis
	Other Respiratory

Post-Op Acknowledgements	
Acknowledgements	
	Patient moved to PACU and identified
	Report taken
	Safety precautions taken to transport
	Patient transported in bed
	Patient transported in stretcher
	Patient transported in crib
	Personal items brought with patient
	Family contacted
	Unable to locate family
	Family notified of patient's PACU admission
	Other
	Report received from
	Patient transported in cart
	Carried
	Accompanied by
	Airway
	Allergies
	Pre-Op vital signs
	Patient status
	Central line
	Arterial line
	Peripheral line
	Swan
	CVP
	Drains
	Foley
	Patient position
	Surgical site
	Nursing Care Plan Initiated

Post-Op Assessments
Assessment Parameters (Assessment Status not included)
Abdomen
Airway
Bowel sounds
Breath sounds
Color/mucosa
Drain #1 Color
Drain #1 Location

Post-Op Care List
Post-Op Care
PACU
SICU
ICU
NICU

Post-Op Checks
Checks Parameters (Checks Status not included)
Capillary Refill Left LE
Capillary Refill Left UE
Capillary Refill Right LE
Capillary Refill Right UE
Color Left LE
Color Left UE
Color Right LE
Color Right UE
Motor Left LE
Motor Left UE
Motor Right LE
Motor Right UE
Pulse Left DP
Pulse Left PT
Pulse Left Radial
Pulse Right PT
Pulse Right Radial
Sensory Left LE
Sensory Left UE
Sensory Right LE
Sensory Right UE
Spinal/Epidural Level Left
Spinal/Epidural Level Right
Temperature Left LE
Temperature Left UE
Temperature Right LE
Temperature Right UE

Post-Op Discharge Evaluation List	
Discharge Evaluation	
	Hemodynamically stable
	Protected reflexes present
	Operative pain control
	Absence of active vomitting
	Skin is dry and warm
	Dressing dry or marked if drainage is present
	Absence of bladder distention
	Tubes, catheters, drains all patent
	Discharged by anesthesia
	Discharge criteria met
	Selected plan of care executed
	Oral temperature>=35.5 C
	Other

Post-Op Discharge Instruction List	
Discharge Instruction	
	Pulmonary care
	Pain Management
	Post-Op assistance
	Absence of active vomitting
	Correct positioning
	Instructed patient and family
	Infant, instructions to care giver
	Infant, no instructions given
	Other

Post-Op Discharge Transfer List	
Discharge Transfer	
	Respirations spontaneous
	Patient on ventilator
	Patient is conscious and responsive
	Patient is conscious and drowsy
	Patient is conscious and non-responsive
	Patient is oriented
	Patient is disoriented
	Patient is in same condition as pre-op
	Report given to:
	Patient to floor via chart
	Patient to floor via bed
	Patient to floor via w/ch
	Patient to car via w/ch
	Patient to floor via crib
	Transported with ventilator
	IVs Patent
	Other

Post-Op Score List
Score Parameters (Score Status not included)
Activity
Circulation
Color
LOC (Level of Consciousness)
Respiration

Pre-Procedure Status List
Pre-Procedure Status
patient awake
patient alert
patient drowsy
patient unconscious
patient identified
consent form signed
chart reviewed
vital signs stable
calm
unresponsive
sedate
apprehensive
last food & drink

Procedure Modifiers
Created by the User

Process Verification List
Process Verification
Consent Signed
Reviewed Teaching Plan
Reviewed Surgical Procedure
Discussed Anesthesia Plan
Responsible Adult Present
No Labs Pending
No Tests Pending

Route List

Route	Abbreviation
Epidural	EPID
Inhalation	INH
Intramuscular	IM
Intranasal	NAS
Intrathecal	INTRC
Intravenous	IV
Laryngeal Tracheal	LTA
Per orum (by mouth)	PO
Per rectum	PR
Subarachnoid	SAB
Subcutaneous	SC
Sublingual	SL
Topical	TOP

Staff List

Staff Group Degree	Name Last Name, First Name Middle Name	Employee Number
Ancillary Staff		
Anesthesia Technicians		
Anesthesiologists		
CRNAs		
OR Nurses		
Recovery Room Nurses		
Resident Anesthesiologists		
Resident Surgeons		
Student CRNAs		
Surgeons		

Vital Units List (Manual)

Unit
%
bpm
C
mmHg

Vitals List (Manual)

Vital Group	Manual Vital	Units
Cardiovascular		
	Diastolic Pressure	mmHg
	Pulse	bpm
	SpO2	%
	Systolic Pressure	mmHg
	Temperature	C
Gas		
	Isoflurane	%
Neuro		
	ICP	mmHg
Ventilation		
	Respiration	bpm

B

Saturn Supported Monitors

This section provides a list of Saturn supported monitors for Saturn Version 2.15, Version 3, Version 4, and Version 4.1.

Saturn Supported Monitors

The following table provides a list of all Saturn supported monitors for Saturn Version 2.15 through Saturn Version 4.1.

Table B-1. Saturn Information System Supported Monitors

Company	Monitor	Protocol	Cable Number	Saturn Versions
Aspect Medical Systems	A-2000	Aspect	4116852-001	Version 4.0, 4.1
Baxter Healthcare Corporation	Baxter Vigilance	Baxter	4117284	Version 4.0 , 4.1
Datex-Ohmeda	Datex AS3 Datex AS5	Datex_AS3	4112477-001	Versions 2.15, 3, 4.0 , 4.1
	Datex Capnomac Ultima	Datex	4113314	Versions 2.15, 3, 4.0 , 4.1
	Vent 7900	Vent7900	4115131-001	Versions 2.15, 3, 4.0
	Vent 7900	Ohmeda_Vent7	4115131-001	Version 4.1
	Vent 78xx	Ohmeda_Vent7	4117868	Version 4.1
	RGM 5200	Ohmeda_RGM	4117868	Version 4.1
	RGM 5250	Ohmeda_RGM	4113566	Version 4.1
Dräger Medical, Inc.	Julian	Medibus	4116852	Versions 2.15, 3, 4.0 , 4.1
	Narkomed 2B	Vitalink	4110328-004	Versions 2.15, 3, 4.0 , 4.1
	Narkomed 2C	Vitalink	4110328-004	Versions 2.15, 3, 4, 4.1
	Narkomed 3	Vitalink	4115131	Versions 2.15, 3, 4 , 4.1
	Narkomed 4	Vitalink	4110328-004	Versions 2.15, 3, 4.0, 4.1
	Narkomed 6000	Vitalink	4110328-004	Versions 2.15, 3, 4.0, 4.1
	Narkomed GS	Vitalink	4110328-004	Versions 2.15, 3, 4 , 4.1
	Vitalert 1000	Vitalink	4110328-004	Versions 2.15, 3, 4.0, 4.1
Dräger Medical, Inc.	Vitalert 2000	Vitalink	4110328-004	Versions 2.15, 3, 4.0, 4.1

Table B-1. Saturn Information System Supported Monitors (continued)

Company	Monitor	Protocol	Cable Number	Saturn Versions
	Vitalert 3000 Series	Vitalink	4110328-004	Versions 2.15, 3, 4.0, 4.1
	Fabius GS	Vitalink	4110328-004	Versions 2.15, 3, 4.0, 4.1
GE Marquette	Dash 2000 Dash 3000	Marquette	4117187	Versions 2.15, 3, 4.0, 4.1
	Eagle, Eagle 3000, Eagle 4000	Marquette	4113117* *and* 4112806-001**	Versions 2.15, 3, 4.0, 4.1
	Solar 7000 Solar 8000	Marquette	4113117* *and* 4112806-001**	Versions 2.15, 3, 4.0, 4.1
	Solar 8000M (V. 2)	Marquette	4116852 (8”) 4116852-002 (30”)	Versions 2.15, 3, 4.0, 4.1
	Solar 9500	Marquette	4110328-004	Versions 2.15, 3, 4.0, 4.1
	Tramscope 12	Marquette	4113117* *and* 4112806-001**	Versions 2.15, 3, 4.0, 4.1
Hewlette Packard-Agilent	HP Merlin CMS M	Mecif	4115132	Versions 2.15, 3, 4.0, 4.1
	HP Viridia 24/26	Mecif	4115872	Versions 2.15, 3, 4.0, 4.1
Novametrix Medical Systems	Novametrix 515A	Nova515A	4113314-001	Versions 2.15, 3, 4.0, 4.1
	Novametrix Capno Guard	Novacom1	4113314-001	Versions 2.15, 3, 4.0, 4.1
Spacelabs Medical	Spacelabs UCW9	Spacelabs	4115131-001	Versions 2.15, 3, 4.0, 4.1
	Spacelabs UCW9 (90387) (Version 1.06.67)	Vitalink	4117136	Versions 2.15, 3, 4.0, 4.1

* Cable information may vary, depending on connection point for some Marquette devices. ASYNC/COMM uses part nos. 4113117 *and* 4112806-001, or TRAMNET HUB 4112442 *and* 411286-001.

** Adaptor

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1

Introducing Environment Manager

This section introduces you to the Environment Manager application.

What Is Environment Manager? 1-2
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What Is Environment Manager?

Environment Manager is a software application that enables you to configure options (templates, defaults, and settings), assign the options a unique name (an environment), and use the environment when it is selected in the Recorder File menu.

- Templates are grouped by drug, event, fluid, vital, charge, and lab items. These items are selected from the site-configuration master list contained within the List Manager application. You select these items using the Template tab.
- Defaults are groups of items, associated with an environment, that you choose to be loaded automatically into each new or opened Recorder case file when its environment is selected from the Recorder File menu.You select these items using the Defaults tab.
- Settings are configurations for the grid and graph areas of the Chart pages of the Holding, Intra-Op and Post-Op sections in Recorder. Chart page settings control the time intervals (time scale) for displaying data, the order of automatic variables in the numeric grid section, the graphical display of data (cardiovascular, gas analysis, and ventilation), and the height of the graph section. You select these items using the Settings tab.

A Windows NT and Windows 2000 Application

Environment Manager operates on personal computers under the Microsoft® Windows NT® and Windows 2000® operating systems. Saturn Administrators who have experience using Windows NT, Windows 95®, or Windows 2000 will find that the application works much like any other Windows-based application. Saturn Administrators and users will also find many familiar Windows features in the Environment Manager interface.

Part of the Saturn Information System

Environment Manager is part of the larger Saturn Information System, which also includes the Recorder, List Manager, Report Manager, and Case Manager applications. See Section 1, Introducing the Administrator's Guide, for a description of each of these Saturn applications.

Environment Manager's Effect on Recorder

Templates

When you use Environment Manager to select items for a template, you can order the list as you wish. The sort order that you choose is maintained so that the list is displayed in the same order in Recorder's Add dialog boxes.

Defaults

You can configure default items for an environment. However, because of case-specific entries, Environment Manager does not permit you to preconfigure specific data entries for a case.

For example, a drug can be added to the environment, but an environment will not set a dosage for the drug. You must enter dosages using Recorder's Add Drug dialog box, which appears when you select the Drug button on the Recorder toolbar.

Settings

Refer to "Settings Section" on page 2-22 for details.

What's New in Environment Manager

The following describes new features in Version 4 of the Environment Manager program:

- The Defaults section is now comprised of two pages instead of one just one:
  - Drugs, fluids/gases, labs, and vitals have been moved to the Grid Items page, where you configure default entries for these items as before.
  - You can configure Post-Op assessments, checks and scores on the Grid Items page as well. When these items are selected as defaults in an environment, the items appear on their respective page grids (i.e., Score, Assess, and Checks pages in the Post-Op section) in Recorder).
  - Event and charge defaults are now configured on the Events & Charges page.

Where Do I Use Environment Manager?

You can use Environment Manager when it is installed on any PC, workstation, or server in your hospital that is connected to the Saturn Information System network. It runs from the Utilities menu of Recorder as a stand-alone application on a nonclinical PC only.

The Network

Environment Manager operates in an information systems network and stores the environments in a centralized database that you can access and update from any workstation or PC that is part of the network. Refer to Figure 1-1. The Saturn Information System Network on page 1-5 in Introducing the Administrator's Guide in this manual for a look at the Saturn network environment.

Workstations

A Saturn workstation is a PC/AT-compatible computer that meets certain minimum hardware requirements. The input devices most likely available at a Saturn Nonclinical Workstation are a mouse and keyboard.

How Do I Use This Manual?

This manual explains how to use the Environment Manager application.

Manual Organization

The manual is organized sequentially to mirror the steps you might take in a typical situation. However, because no user or situation is truly typical, you can skip around in both the application and the manual.

Conventions

This manual uses standard typographical and keyboard conventions to help you interpret the information presented. These conventions are described in the following table.

Table 1-1. Typographical and Keyboard Conventions

Convention	Used For	Example
Helvetica Type	Window controls, such as entry fields, menu options, and toolbar buttons.	In the Last field, enter the patient's last name.
Small Capitals	Keyboard keys.	To display a menu, press the ALT key, then the underlined letter in the menu name.
Italics	A generic data description, for which you or the system substitutes a specific value.	Enter the time in *hh:mm* format.
Monospace Type	Messages displayed by the system.	If you receive the message **`Case in Use`**, the case is already open.
Comma (,) between key names	Keyboard keys that you press one after the other. (Press the first key and release it. Then press the second key and release it.)	To display the File menu, press ALT, F.
Plus sign (+) between key names	Keyboard keys that you press simultaneously. (Press the first key and, while holding it, press the second key. Then release both keys.)	Press the TAB key (SHIFT+TAB to move backward) until the button is highlighted.

2

Learning the Basics

This section describes various features of the Environment Manager interface and explains how to use them.

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The Environment Manager Interface

Environment Manager's graphical user interface uses the same basic Windows elements as the Saturn Recorder application. See also "Learning the Basics" in the Saturn Recorder User's Guide.

Note: If you want to review this section and run the software at the same time, refer to Section 3 to start the program. Then return to this page.

Main Window

When Environment Manager is running, its Main window is displayed. If an environment is open, it is contained inside the Main window. However, if no environments are open, the Main window remains empty, as shown in Figure 2-1.

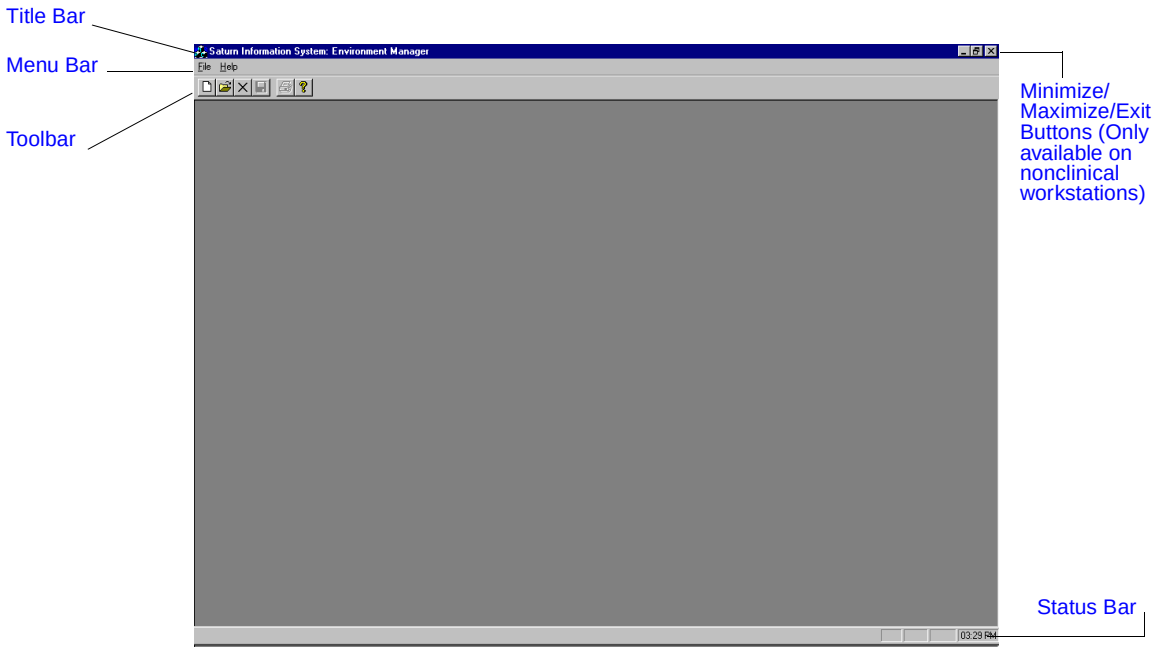

Figure 2-1. Main Window, No Environments Open

Main Window Features

Because the Main window is always open, its title bar, menu bar, toolbar, and status bar are always available to you.

Title Bar

The title bar identifies the Environment Manager application (see Figure 2-1 on page 2-3). If an environment is open, the title bar also includes the name of the environment. The minimize/maximize/exit buttons in the title bar operate the same way as in any Windows-based application.

Minimize/ Maximize/Close Buttons

When you press the minimize button in the title bar (see Figure 2-1 on page 2-3), the Environment Manager Main window shrinks to the status bar of Recorder, and the Recorder Main window appears (or the desktop or other application). To maximize Environment Manager again, click the Saturn Information System icon on the status bar. Or, select Environment Manager from the Utilities menu in the Recorder program.

Menu Bar

The menu bar contains individual menus that you can open. Each open menu, in turn, contains items that you can choose to initiate an action. For example, some of the options on the File menu let you create a new environment and open an existing environment. Refer to Table 2-1 on page 2-5 for a complete description.

When no environments are open, the Main menu bar is displayed (Figure 2-2). It contains just two menus: File and Help. File menu options include New, Open, Delete and Exit. These options are all you need to start an environment.

Figure 2-2. Menu Bar, No Open Environments

When an environment is open, the Environment menu bar (Figure 2-3) replaces the Main menu bar (Figure 2-2). The Environment menu bar contains the File, View, Window, and Help menus. Also, the File menu from the Main menu bar includes additional selections, including Close, Save, Save As, Print and Print Preview. These additional File menu options allow you to change an environment as often as you like.

Figure 2-3. Menu Bar, Environment Open

Table 2-1. Environment Manager Menu Items

Menu Name	Menu Item	Description
File	New	Creates a new environment.
	Open	Displays a list of all existing environments and allows you to open them. *Note:* You can open several environments one after the other, and they will remain open until you close them individually or exit from Environment Manager altogether.
	Close	Closes the open and selected environment.
	Delete	Displays a list of all existing environments and allows you to delete them.
	Save	Existing Environment: saves the open and selected environment. New Environment: displays the Save Environment dialog box.
	Save As	Displays the Save Environment dialog box and saves the open and selected environment with the name you specify.
	Print	Available in a future release.
	Print Preview	Available in a future release.
	Exit	Exits the Environment Manager application.
View	Templates	Displays the current environment's Template. When you open an environment, the template is what is initially displayed.
	Defaults	Displays the Defaults for the current environment. Defaults include: • Items that appear on Charts (drugs, etc.) and on the Checks, Assess, and Score pages of Recorder • Charges and Events that appear on the Summary pages of Recorder.
	Settings	Displays the current environment Settings for the grid , time scale, and graph sections of the Charts in the Recorder program. Also provides an option to show all entries on the Summary pages in Recorder.
Window	Cascade	Displays the currently opened templates in an overlapping arrangement on the screen.
	Tile	Displays the currently opened templates in a non-overlapping arrangement on the screen.

Table 2-1. Environment Manager Menu Items

Menu Name	Menu Item	Description
Help	About Environment Manager	Displays the About Environment Manager dialog box that provides release version and copyright information.

Choosing a Menu Item

Use one of the methods in Table 2-2 to choose or select a menu item, according to your input device.

Table 2-2. Choosing a Menu Item

Input Device	Method
Touch Screen	On the menu bar, tap a menu name to display the menu. Then tap a menu item.
Mouse	On the menu bar, click a menu name to display the menu. Then click a menu item.
Keyboard	To display a menu, press the ALT key and then the key that corresponds to the underlined letter in the menu name (i.e., ALT, F for File menu). When the menu appears, do one of the following: • Press the UP or DOWN ARROW key to highlight an item, then press the ENTER key. • Press the key that corresponds to the underlined letter in an item name. *Example:* You want to choose the New option on the File menu. Press ALT and then F (ALT, F) to display the File menu. Then, either press the N key, or highlight New and press ENTER. *Note:* Some menu items have keyboard accelerators which allow you to skip the steps in the above example. Instead, to open a new environment, press its accelerator (CTRL+N). If an item has a keyboard accelerator, it is shown on the menu to the right of the menu option.

Toolbar

The toolbar (Figure 2-4) is located just beneath the menu bar. The buttons on the toolbar duplicate the functionality of various menu selections. They give you ready access to functions that you use frequently or need to implement quickly, such as opening another environment. Whereas some of the toolbar buttons are always available for use, others are available only when an environment is open. Buttons that are available or "active" have dark text and graphics. Buttons that are not available or are "inactive" have light text and graphics.

Figure 2-4. Toolbar

Pressing a Toolbar Button

Use the method in Table 2-3 that corresponds to your input device.

Table 2-3. Pressing a Toolbar Button

Input Device	Method
Touch Screen	Tap the button.
Mouse	Click the button.
Keyboard	All toolbar buttons are duplicated as items on various menus, where you can select them using the keyboard (see Table 2-2 on page 2-7). Many of these menu items also have keyboard shortcuts (pressing ALT and the underlined letter), and accelerator keys, which allow you to repeat the function without exiting and reentering (pressing CTRL and the underlined letter of the menu item). For example, if you wanted to create several new files, you would press ALT F then N. Instead of immediately closing the new file you just created, you could use the accelerator keys to open another new file. **Toolbar Button/Menu Item/Keyboard Shortcut/Accelerator Keys** New — File:New/ALT F, N/CTRL+N Open — File:Open/ALT F, O/CTRL+O Delete — File:Delete/ALT F, D/CTRL+D Save — File:Save/ALT F, S/CTRL+S Print — File:Print/ALT F, P/CTRL+P About — Help:About Environment Manager/ALT H, A

Status Bar

The status bar contains general status information, such as the current time, and the status of the NUM LOCK, CAPS LOCK, and SCROLL LOCK keys. It also displays a line of text explaining the field or area of the screen that is pointed to or selected.

Environment Window

When you create or open an environment, an environment window is displayed inside the Main window. Figure 2-5 shows the window for a sample environment.

The Templates section always appears first when you open or create an environment (see the Section tabs at the bottom of the window). This is the window section you use to configure templates for drugs, fluids, events, charges, lab tests, and manual vitals by selecting items using the Edit List buttons.

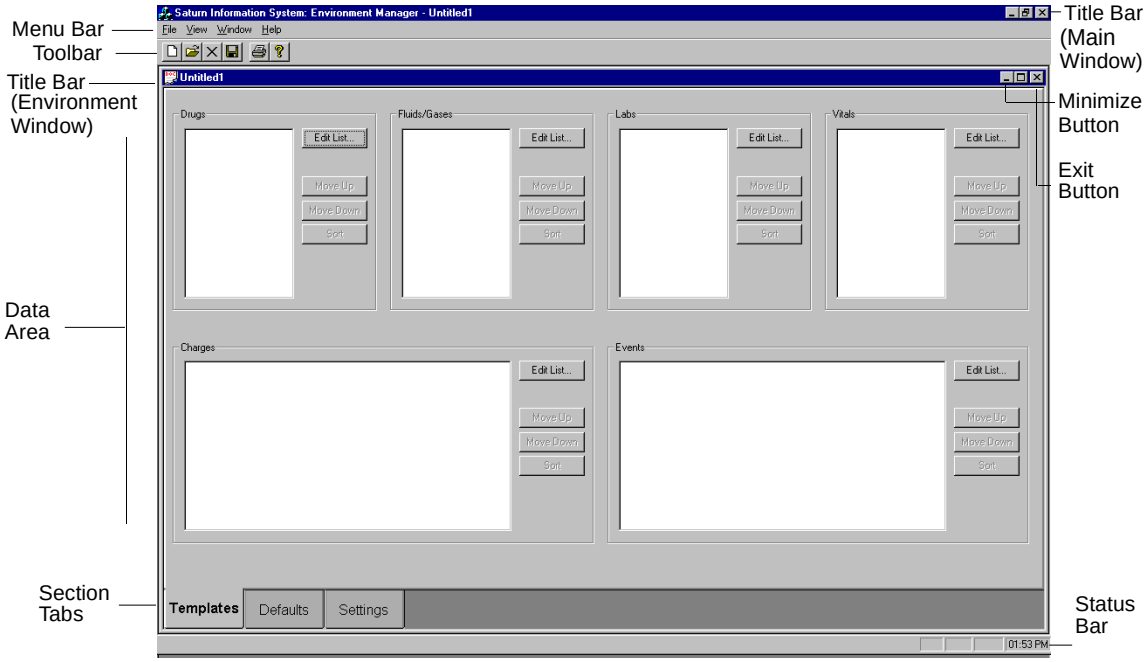

Figure 2-5. Environment Window, Templates Section

Environment Window Features

Environment Manager allows several environment windows to be opened in the Main window at the same time. Each environment window has its own title bar, section tabs, and a data area for working with environment data. The Main window maintains the toolbar that is used by all of the opened environments (Figure 2-5).

Minimizing Environments

When you minimize an environment by selecting the minimize button on the environment window title bar (Figure 2-6), it shrinks to an icon just above the status bar. Click the maximize button on the icon to redisplay a minimized environment.

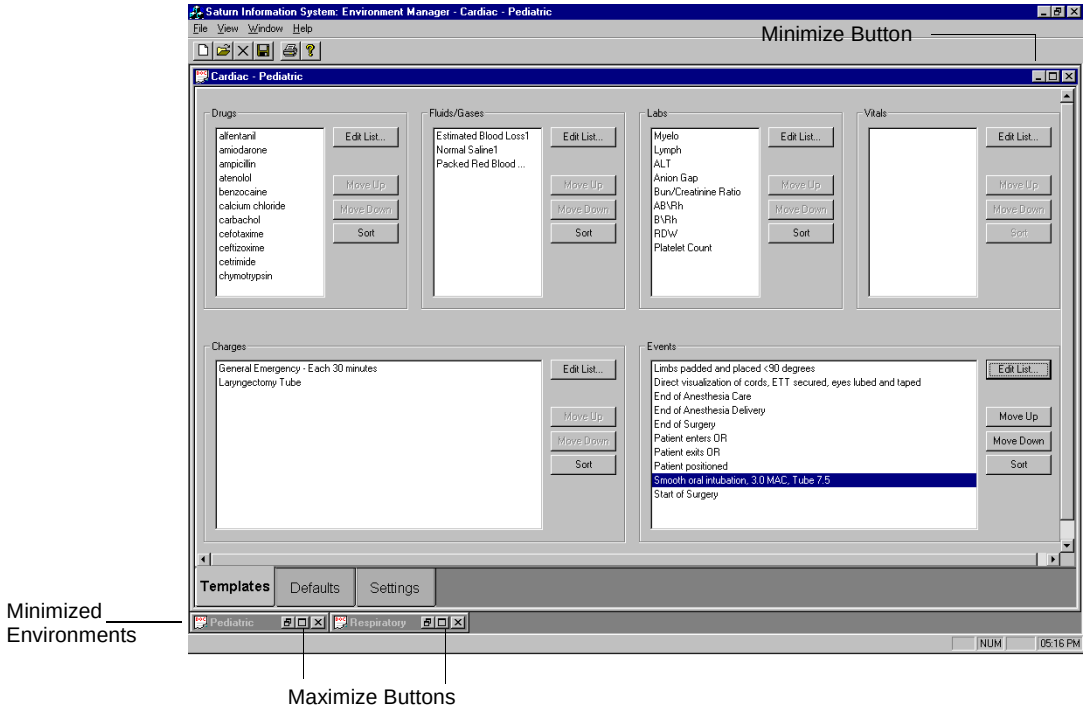

Figure 2-6. Minimized Environments (two shown)

Tile Environments

If you open several environments, they initially appear in an enlarged version of a cascade format on the screen. However, if you select Tile from the View menu, the environments appear as shown in Figure 2-7.

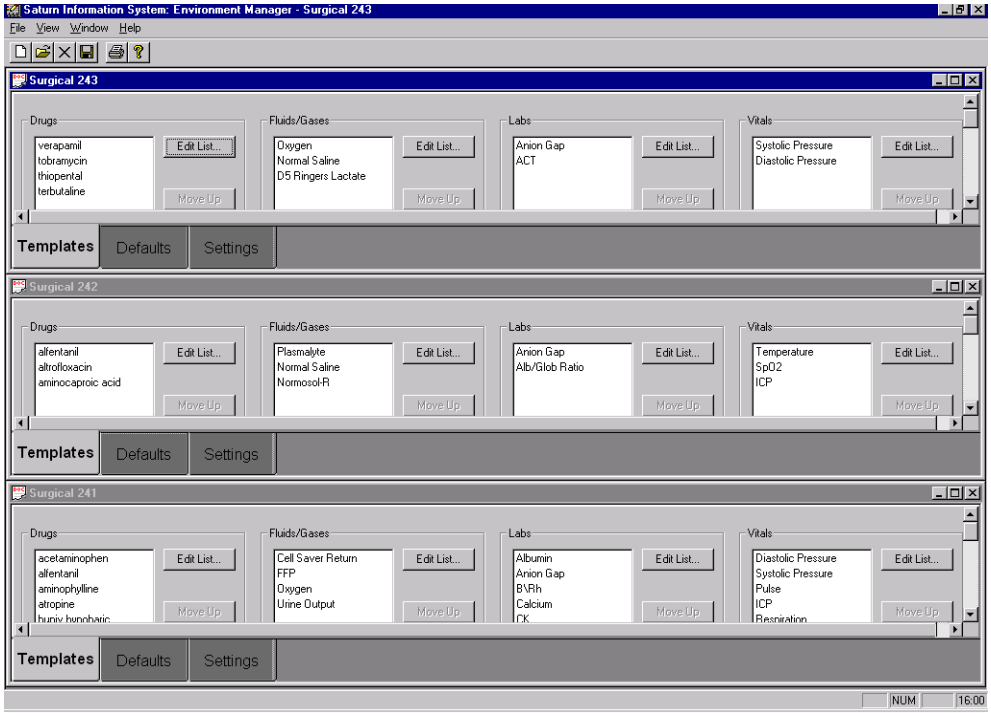

Figure 2-7. Tile Environments

When you minimize a tile environment, it shrinks to an icon above the status bar (Figure 2-6 on page 2-10). However, the icon may not be visible if other environments are open. If you want to maximize that environment again, you must select Tile from the Window menu for its icon to reappear.

Cascade Environments

When you select Cascade from the Window menu, environments appear as shown in Figure 2-8.

Note: Environments that were minimized before selecting the Cascade option will appear as icons above the status bar (Figure 2-6 on page 2-10). You must maximize each one and then select Cascade from the Window menu if you want them to appear as shown in Figure 2-8.

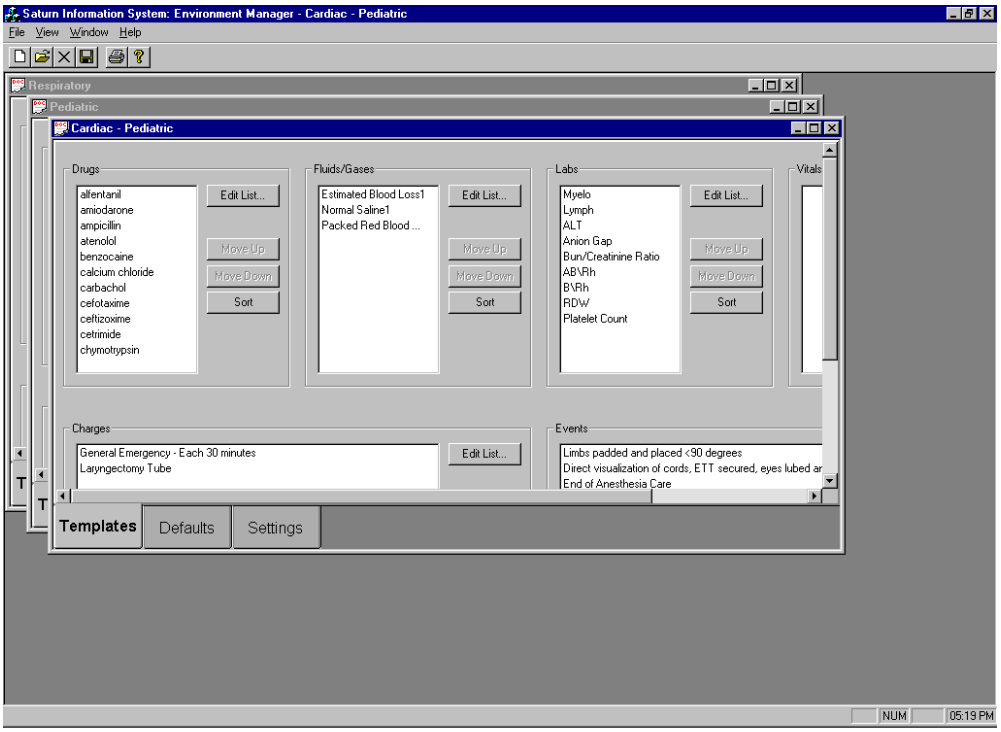

Figure 2-8. Three Cascade Environments

Below are some general guidelines when opening and viewing several environments:

- When you minimize an environment (cascade or tile), it appears at the bottom of the Environment Manager Main window. (If the icon is not visible, select Tile or Cascade from the Window menu and it will reappear.) Click the maximize button on its icon to redisplay it on the screen.
- You must select Cascade or Tile again for the minimize/maximize buttons to reappear on that environment's window; then you can minimize it again, or close it without exiting the program.
- To recover other opened but minimized environments, select Tile from the View menu. The environment icons appear above the status bar.
- Press an environment's close/exit button (Figure 2-5 on page 2-9) to close the environment without exiting from the Environment Manager program.

Section Tabs

The tabs at the bottom of the window (Figure 2-9) allow you to access the defaults and settings of an environment, as well as go back to its template. The tab that is selected is highlighted and appears in bold type, such as the Templates section in Figure 2-9.

Each section contains a data area where you can view and add items to an environment by using the Edit List buttons (for the Templates and Defaults sections) or the Settings button (for the Settings section). The following pages describe each section and its associated buttons and dialog boxes.

Templates Section

The Templates section (Figure 2-9) allows you to configure templates by creating lists of drugs, fluids, events, charges, lab tests, and manual vitals that will always be used when a particular environment is loaded in the Recorder program. Using the Environment Manager Edit List buttons, you create new lists, or add or delete items from the existing lists.

Note: The items that appear when you select an Edit List button (i.e., the All list and the lists in the other tabs) were configured in List Manager.

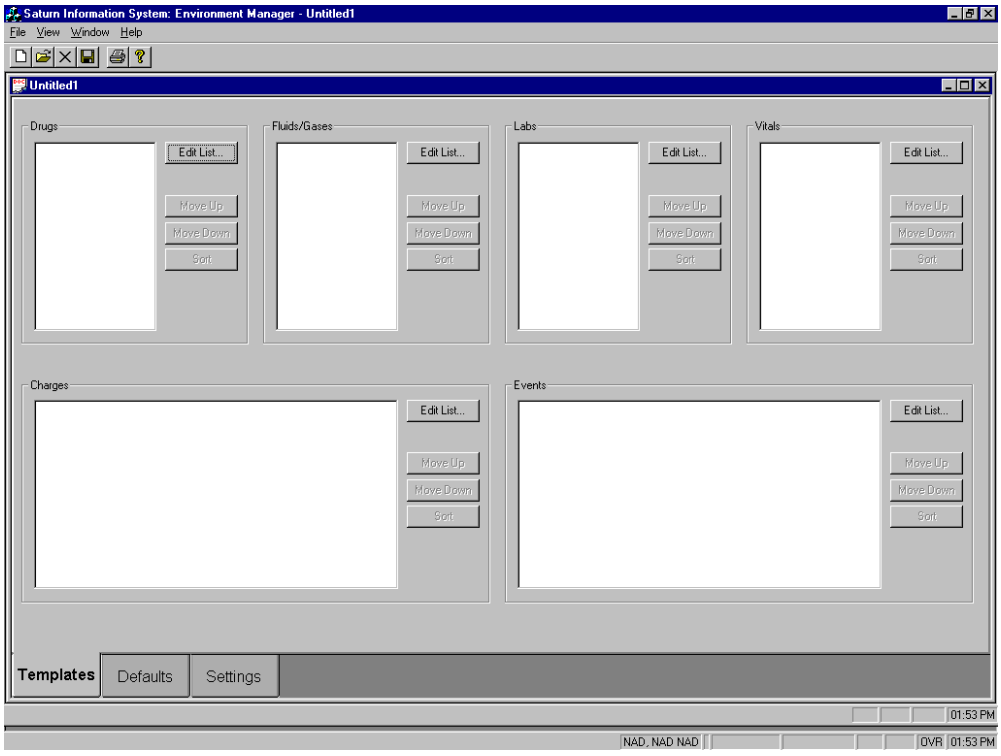

Figure 2-9. Templates Section

Select Drug(s) Dialog Box

The Select Drug(s) dialog box (Figure 2-10) displays the list of all available drug items that were configured in List Manager. This list also appears in the Add Drug dialog box in the Recorder program.

When selecting drugs for an environment, press the tabs in the dialog box (i.e., Induction, Narcotics, etc.) and select the boxes of the items you want checked.

Note: When you select items in the All tab, the items are automatically selected in the other tabs in the dialog box.

Or, you can find the drug by typing its full or partial name in the speed search field. As you type, the letters appear in the speed search field and the items beginning with the letters you typed (i.e., bu in Figure 2-10) are listed.

Note: There is no insertion point in the speed search field. Just begin typing on the keyboard and the letters appear.

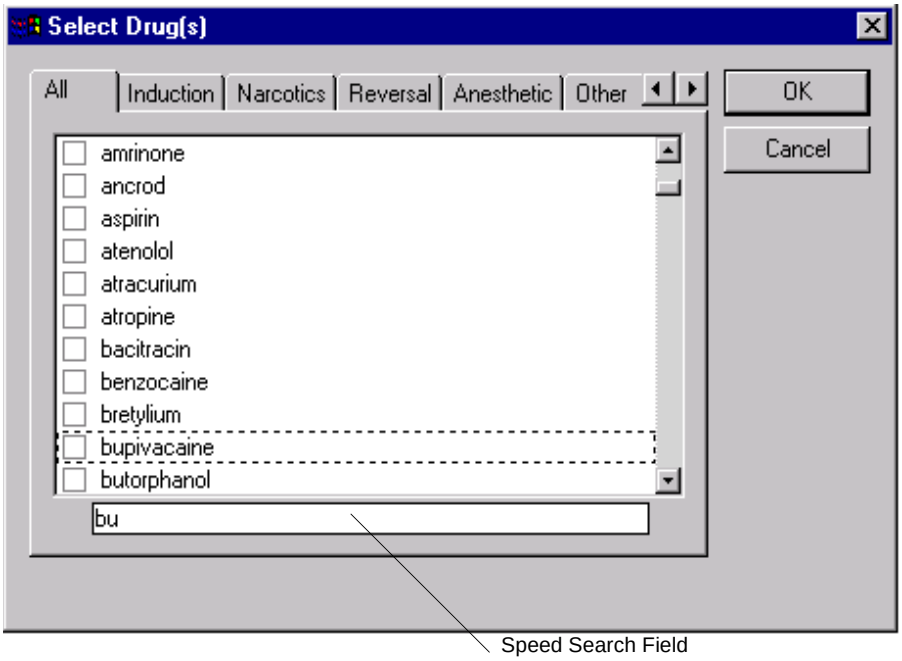

Figure 2-10. Select Drug(s) Dialog Box

Example: To select a drug, press or select the Templates tab, then the Edit List button in the Drugs area. Select the checkboxes of the drugs you want included in the template either from the All tab, or from the individual tabs that follow.

Select Fluids/ Gas(es) Dialog Box

The Select Fluids/Gas(es) dialog box (Figure 2-11) displays the list of all available fluid and gas items that were configured in List Manager. This list also appears in the Add Fluid/Gases dialog box in the Recorder program.

When selecting fluids and gases for an environment, press the tabs in the dialog box (i.e., Fluid Out, Fluid In, etc.) and select the boxes of the items you want checked.

Note: When you select items in the All tab, the items are automatically selected in the other tabs (groups) in the dialog box.

Or, you can find the fluid or gas by typing its full or partial name in the speed search field. As you type, the letters appear in the speed search field and the items beginning with the letters you typed are listed..

Note: There is no insertion point in the speed search field. Just begin typing on the keyboard and the letters appear.

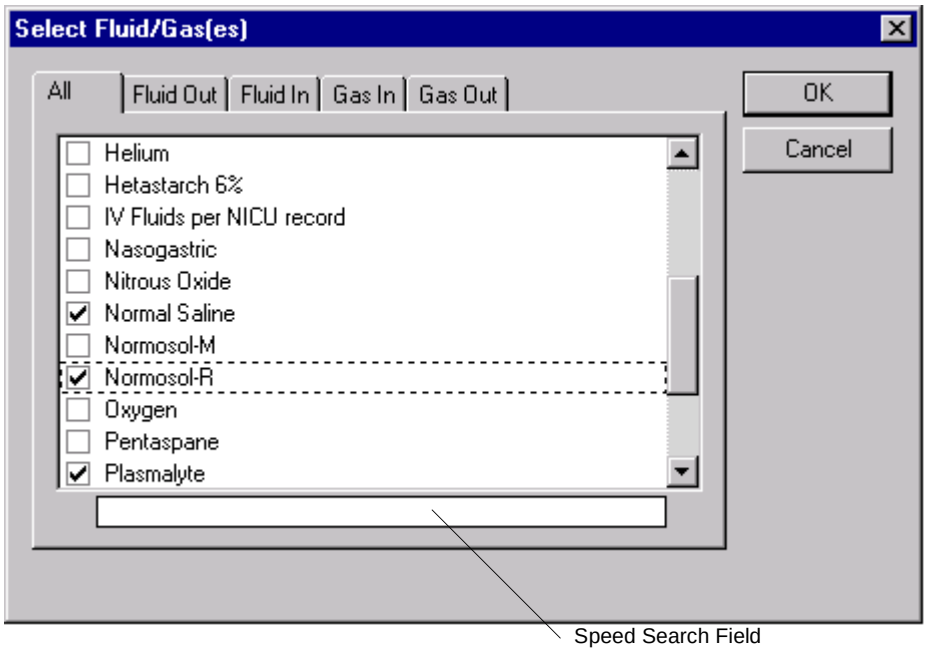

Figure 2-11. Select Fluid/Gases Dialog Box

Example: To select a fluid or gas, press or select the Templates tab, then the Edit List button in the Fluids/Gases area. Select the checkboxes of the fluids or gases you want included in the template either from the All tab, or from the individual tabs that follow.

Select Lab(s) Dialog Box

The Select Lab(s) dialog box (Figure 2-12) displays the list of all available lab items that were configured in List Manager. This list also appears in the Add Lab dialog box in the Recorder program.

When selecting labs for an environment, press the tabs in the dialog box (i.e., Chemistries, Hematology, etc) and select the boxes of the items you want checked.

Note: When you select items in the All tab, the items are automatically selected in the other tabs (groups) in the dialog box.

Or, you can find the lab by typing its full or partial name in the speed search field. As you type, the letters appear in the speed search field and the items beginning with the letters you typed are listed.

Note: There is no insertion point in the speed search field. Just begin typing on the keyboard and the letters appear.

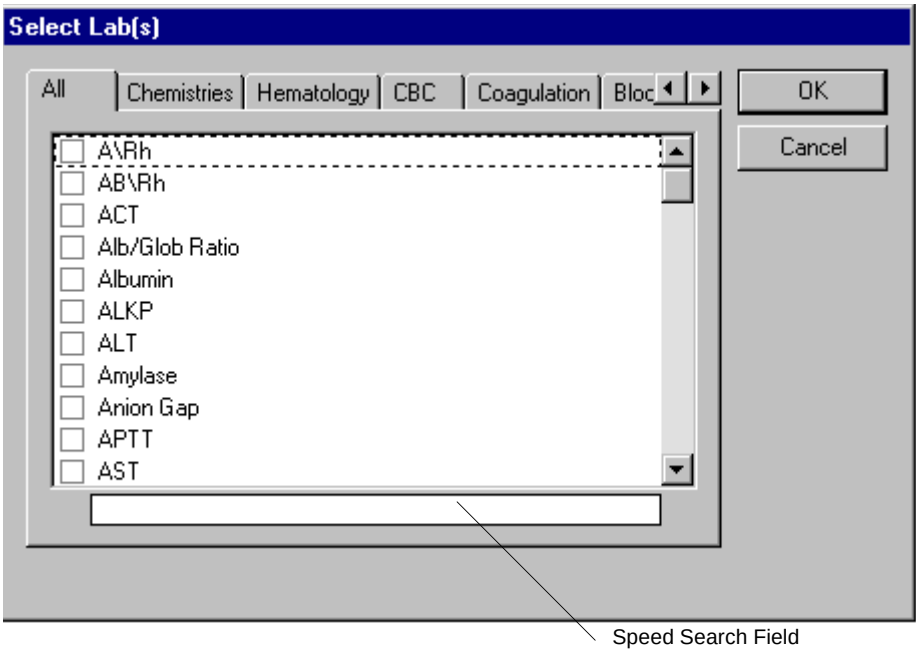

Figure 2-12. Select Lab(s) Dialog Box

Example: To select a lab, press or select the Templates tab, then the Edit List button in the Labs area. Select the checkboxes of the labs you want included in the template either from the All tab, or from the individual tabs that follow.

Select Manual Vital(s) Dialog Box

The Select Manual Vital(s) dialog box (Figure 2-13) displays the list of all available vital items that were configured in List Manager. This list also appears in the Add Manual Vital dialog box in the Recorder program.

When selecting vitals for an environment, press the tabs in the dialog box (i.e., Pulse, Temperature, etc.) and select the boxes of the items you want checked.

Note: When you select items in the All tab, the items are automatically selected in the other tabs (groups) in the dialog box.

Or, you can find a vital by typing its full or partial name in the speed search field. As you type, the letters appear in the speed search field and the items beginning with the letters you typed are listed.

Note: There is no insertion point in the speed search field. Just begin typing on the keyboard and the letters appear.

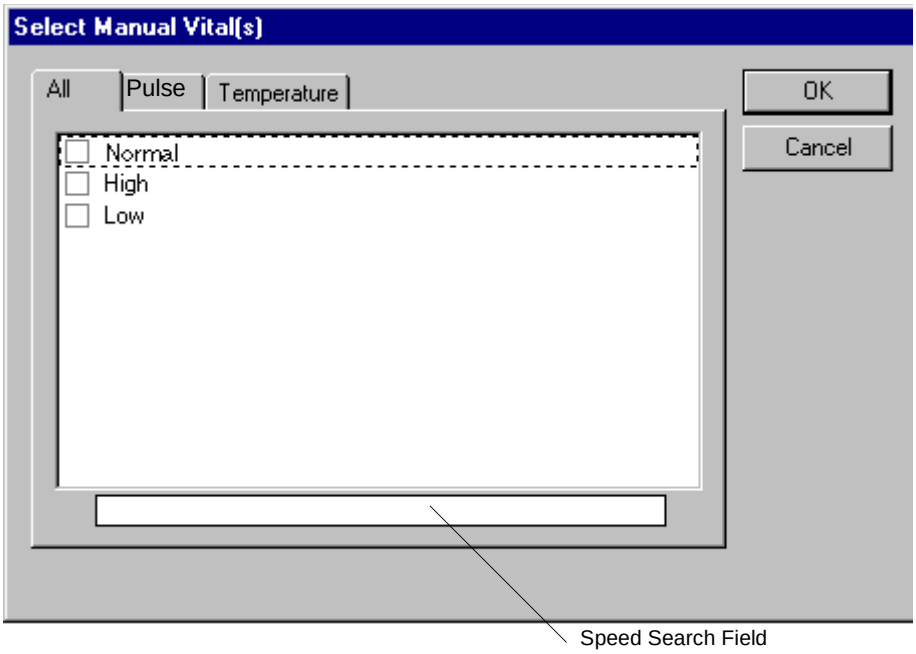

Figure 2-13. Select Manual Vital(s) Dialog Box

Example: To select a vital, press or select the Templates tab, then the Edit List button in the Vitals area. Select the checkboxes of the vitals you want included in the template either from the All tab, or from the individual tabs that follow.

Select Charge(s) Dialog Box

The Select Charge(s) dialog box (Figure 2-14) displays the list of all available charge items that were configured in List Manager. This list also appears in the Add Charge dialog box in the Recorder program.

When selecting charges for an environment, press the tabs in the dialog box (i.e., Anesthesia Charges or Hospital Charges) and select the boxes of the items you want checked.

Note: When you select items in the All tab, the items are automatically selected in the other tabs (groups) in the dialog box.

Or, you can find the charge by typing its full or partial name in the speed search field. As you type, the letters appear in the speed search field and the items beginning with the letters you typed are listed.

Note: There is no insertion point in the speed search field. Just begin typing on the keyboard and the letters appear.

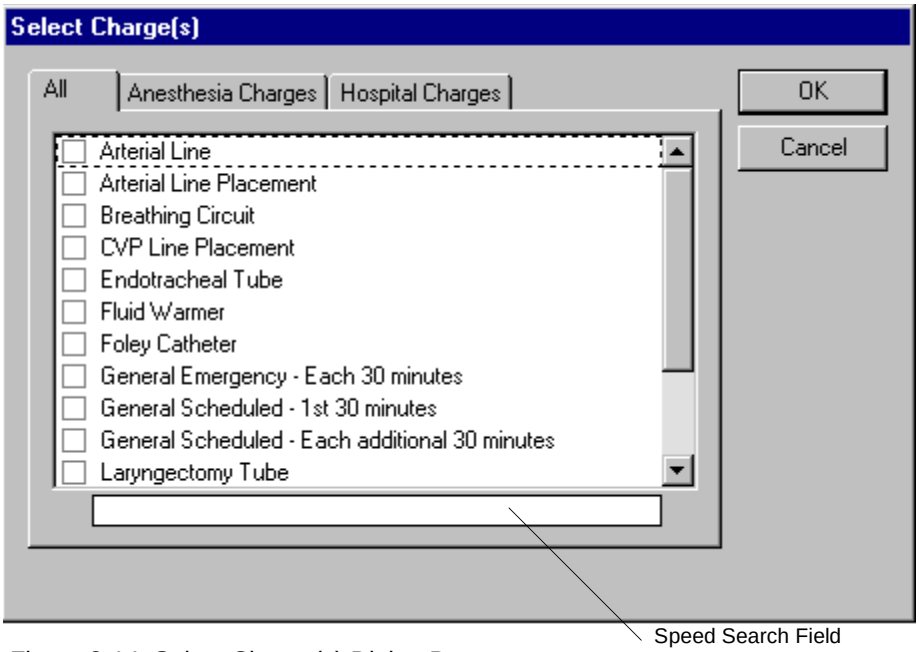

Figure 2-14. Select Charge(s) Dialog Box

Example: To select a charge, press or select the Templates tab, then the Edit List button in the Charges area. Select the checkboxes of the charges you want included in the template either from the All tab, or from the individual tabs that follow.

Select Event(s) Dialog Box

The Select Event(s) dialog box (Figure 2-15) displays the list of all available event items that were configured in List Manager. This list also appears in the Add Lab dialog box in the Recorder program.

When selecting events for an environment, press the tabs in the dialog box (i.e., Start/Stop Times, Miscellaneous, etc) and select the boxes of the items you want checked.

Note: When you select items in the All tab, the items are automatically selected in the other tabs (groups) in the dialog box.

Or, you can find the event by typing its full or partial name in the speed search field. As you type, the letters appear in the speed search field and the items beginning with the letters you typed are listed.

Note: There is no insertion point in the speed search field. Just begin typing on the keyboard and the letters appear.

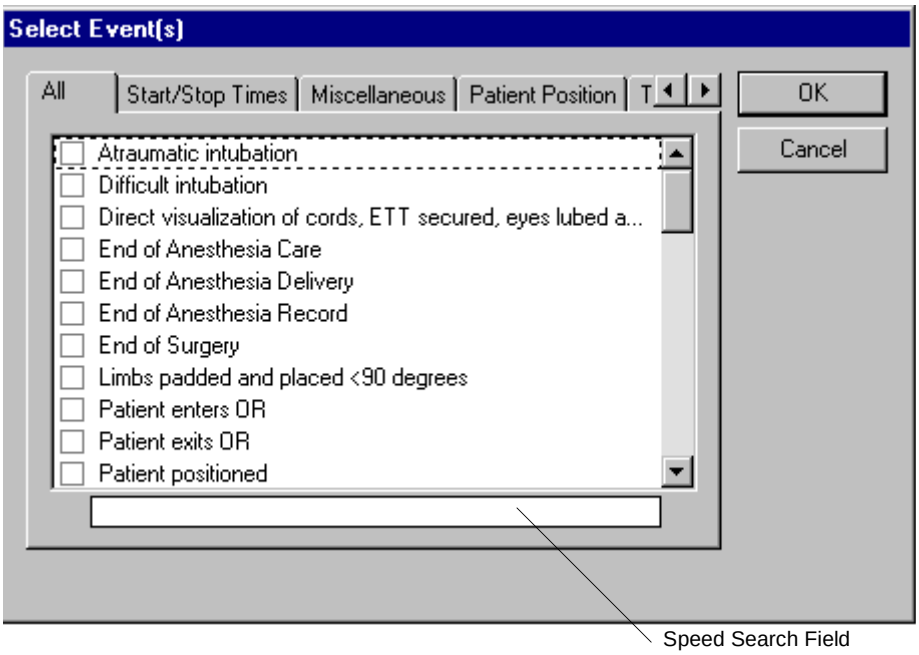

Figure 2-15. Select Event(s) Dialog Box

Example: To select an event, press or select the Templates tab, then the Edit List button in the Events area. Select the checkboxes of the events you want included in the template either from the All tab, or from the individual tabs that follow.

Defaults Section

The Defaults section is comprised of two pages. The Grid Items page (Figure 2-16) allows you to configure default entries for drugs, fluids/gases, labs, manual vitals, and Post-Op assessments, checks, and scores. Charge and Event defaults are configured on the Events & Charges page (Figure 2-17 on page 2-21).

The drug, fluids, labs and manual vital entries will be displayed on the Chart pages of the Holding, Intra-Op and Post-Op sections of the Recorder program in the order they are configured on this page. Post-Op scores, assessments and checks will be displayed on their corresponding pages of the Post-Op section, also in the order they configured on this page. Charges and Events are displayed in the Summary pages of Recorder when the selected offset time for the item occurs in the case.

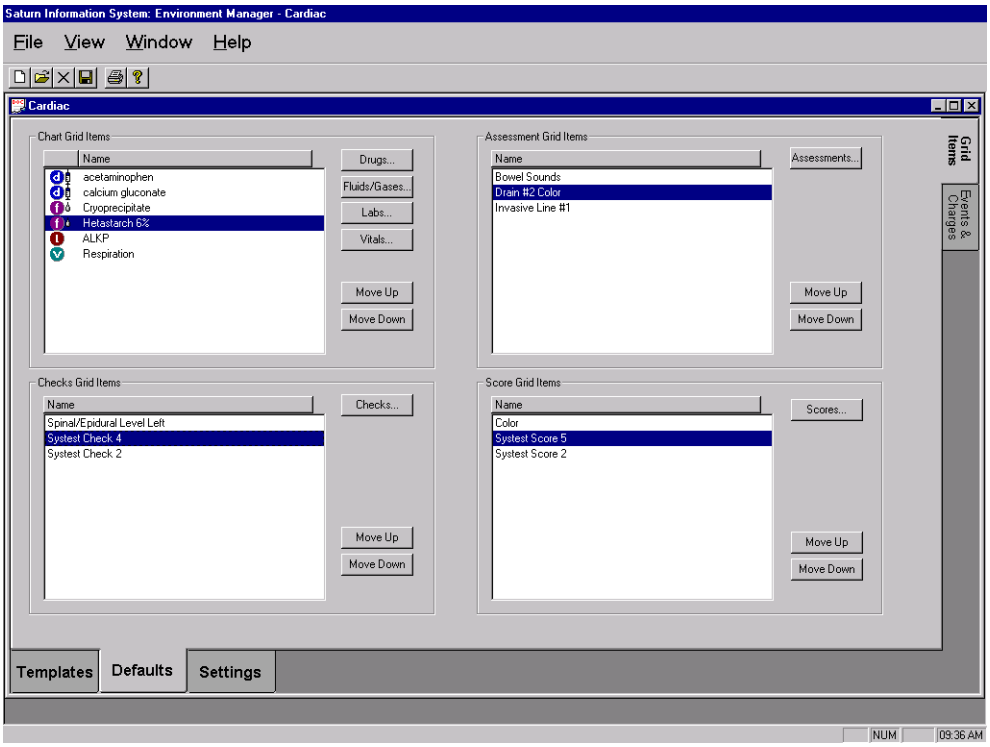

Figure 2-16. Defaults Section, Chart Grid Page

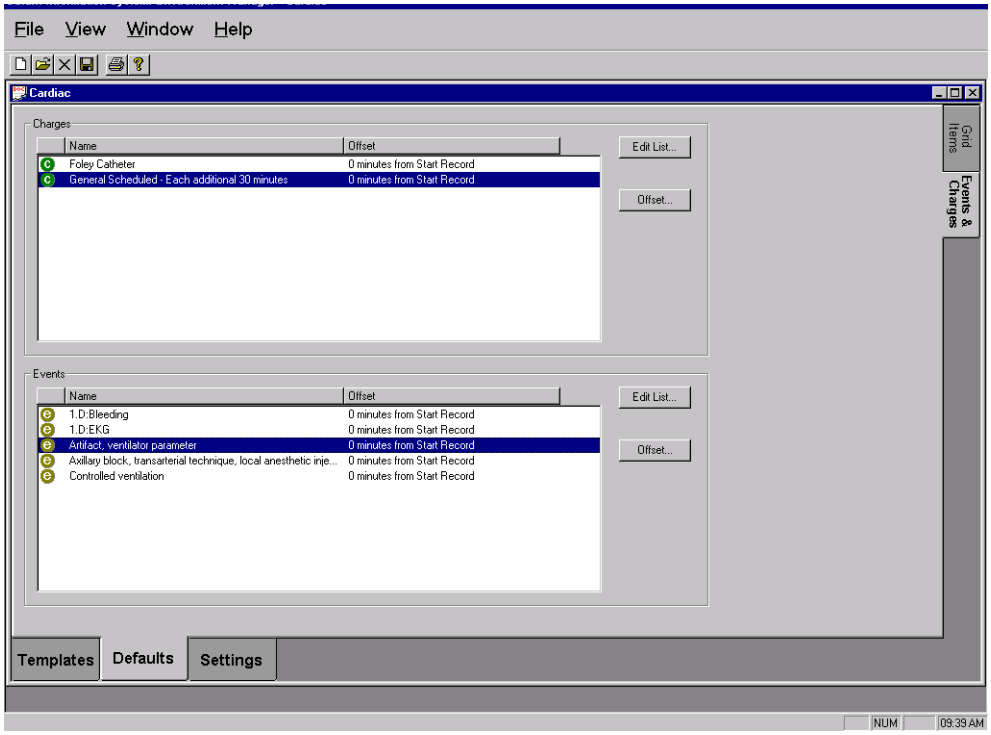

Figure 2-17. Defaults Section, Events & Charges Page

Settings Section

The Settings section lets you configure what will appear in the grid and graph areas of the Chart pages in the Holding, Intra-Op and Post-Op sections of the Recorder program. If you select the Show All Entries in Summary View box, all entries for the case will appear in the Recorder Summary pages.

Note: Any entries made between the various recording phases for a patient will not appear in the grid of a Chart page. For example, if you enter a drug after the end of the Intra-Op period but before the begining of the Post-Op period, you would not be able to retrieve that entry and edit it (unless you change the time markers). However, if you select the Show All Entries in Summary View check box, these entries will appear on the Summary pages when this environment is used in Recorder.

The time scale you select will be reflected on the grid and graph area of the Chart pages, and the Post-Op's Score, Assess and Checks pages when recording as a Post-Op workstation.

The Height slide bar in this dialog box controls the height of the graph on the Chart pages in the Recorder program.

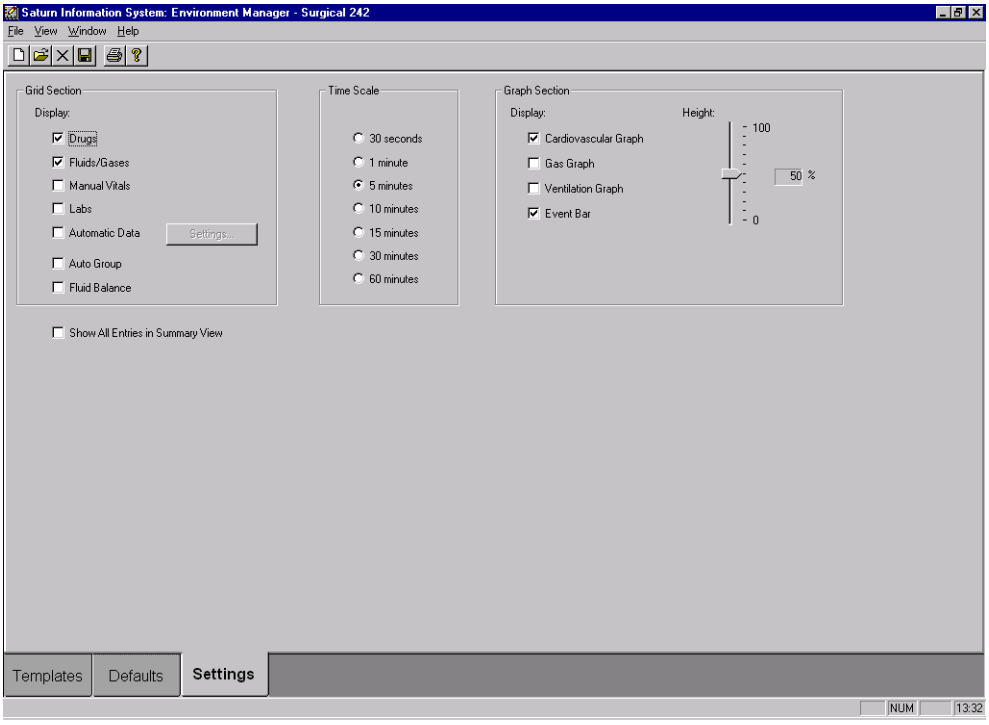

Figure 2-18. Settings Section

3

Starting Environment Manager

This section discusses security issues that affect your access to Environment Manager, as well as how to start and log on to Environment Manager.

Security 3-2
Starting from a Clinical Workstation 3-2
Starting from a Nonclinical Workstation 3-3

Security

Environment Manager is accessible from the Utilities menu of Recorder and as a stand-alone application. The Saturn Information System provides a level of security that ensures only authorized users are able to access the Environment Manager program.

Access to Environment Manager

Logon security controls access to Environment Manager. The Saturn Administrator assigns a user ID, password, and security level to each person in the Saturn Information System, and only users with a recognized ID and password combination can log on to Environment Manager. Refer to Figure 4-52 on page 4-33 in Section 4 of the List Manager User's Guide for further details.

Note: Users with Administrator rights have full access to all environments. Users without Administrator rights have full access to the environments they create, and have read-only access to all other environments.

Starting from a Clinical Workstation

You can launch Environment Manager from the Utilities menu of the Recorder program at a clinical workstation. The Recorder logon name and password is automatically accepted by Environment Manager, as long as you have the appropriate security privileges. At clinical workstations, Recorder starts automatically when you turn on the computer. However, at any other workstation you may have to start Recorder manually.

If you are authorized to use Environment Manager, its Main window is displayed when you select Environment Manager from the Utilities menu in Recorder. If you are not authorized to use Environment Manager, then a message appears and you are prevented from entering the program.

Prerequisites

The following prerequisites apply to this function:

- Environment Manager must be installed.
- You must be an authorized Recorder and Environment Manager user and have a valid user ID and password in order to start Environment Manager from the Utilities menu in Recorder. The password is case sensitive, so make sure you know which letters are uppercase and which are lowercase.

Procedure

To start Environment Manager from the Recorder Utilities menu, follow the procedure for the input device you are using:

Touch Screen	Tap the Utilities menu in Recorder. Then tap Environment Manager.
Mouse	Click the Utilities menu in Recorder. Then click Environment Manager.
Keyboard	Press ALT, U, E. Or, press ALT, U, then press the UP or DOWN ARROW key to highlight Environment Manager and press the ENTER key.

The Environment Manager Main window appears (Figure 3-1 on page 3-3).

Figure 3-1. Environment Manager Main Window

Starting from a Nonclinical Workstation

Before you can use Environment Manager, you must log on. The logon process ensures that only authorized users can access the application.

Prerequisite

You must be an authorized Environment Manager user and have a valid user ID and password. The password is case sensitive, so make sure you know which letters are uppercase and which are lowercase.

Procedure

Follow these steps to log on to Environment Manager.

Note: This procedure describes how to start Environment Manager without accessing Recorder. However, you can start Environment Manager from the Utilities menu of Recorder. Refer to "Starting from a Clinical Workstation" on page 3-2.

1. To start Environment Manager at a nonclinical workstation, follow the procedure for the input device you are using:

Touch Screen	Double-tap the Environment Manager icon on the Windows NT desktop. –Or– Tap the Environment Manager icon to select it and then press the ENTER key.
Mouse	Double-click the Environment Manager icon on the Windows NT desktop. –Or– Click the Start button on the desktop status bar, then select Programs, Saturn, Environment Manager.
Keyboard	With the ARROW keys, select the Environment Manager icon on the Windows NT desktop, and then press the ENTER key.

The Logon dialog box appears (Figure 3-2).

Figure 3-2. Logon Dialog Box

2. In the User Logon field, select or type your user name.
3. In the Password field, type your password. Make sure to type all letters in the correct case. For security purposes, asterisks are displayed instead of the password as you type.
4. Press the OK button. The Environment Manager Main window appears (Figure 3-1 on page 3-3). You are logged on to Environment Manager.
5. Proceed to the next section.

4

Creating and Opening Environments

This section explains how to create a new environment and how to open an existing environment.

Creating a New Environment..... 4-2
Opening an Existing Environment 4-6

Creating a New Environment

Creating a new environment begins in the Templates section. After making selections in this section, you will need to select defaults and settings

Prerequisites

The following prerequisite applies to this function:

You must be logged on to Environment Manager and the Main window must be displayed on the screen.

Procedure

Follow these steps to open a new environment:

1. On the toolbar, press the Open button. When the Select Environment dialog box appears, press the New button.

   – Or –
   On the File menu, choose New.

   – Or –
   On the keyboard, press CTRL+N.

   – Or –
   On the toolbar, press the New button.

   A blank template appears (Figure 4-1).

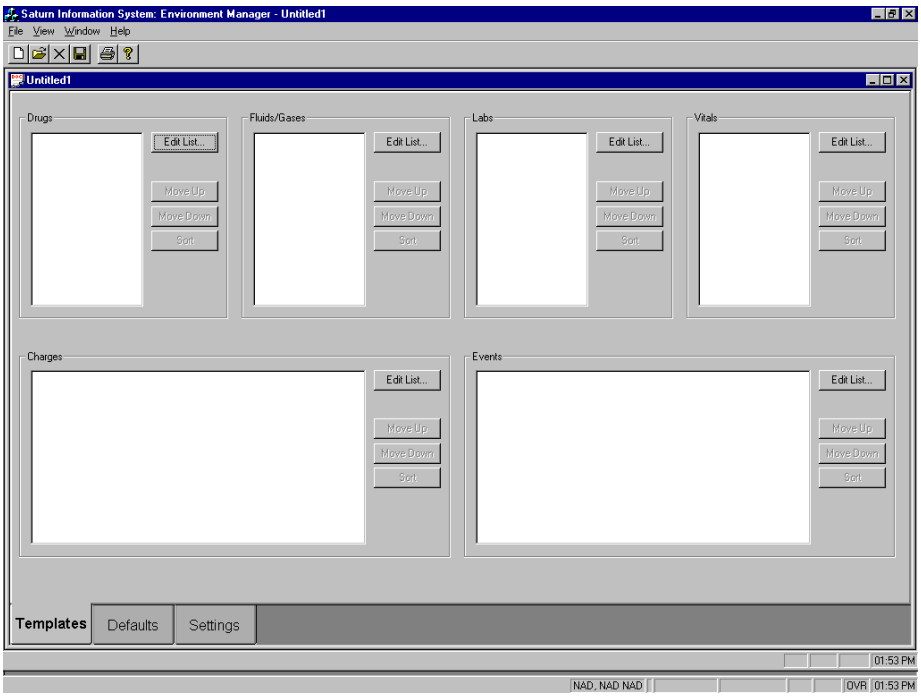

Figure 4-1. Blank Template Section

2. Make selections in each data area (i.e., Drugs, Fluids/Gases, etc.) by pressing the Edit List button and selecting the check boxes of the list items you want to appear whenever this environment is used. (Select items on the All tab or click individual tabs and then select them).

After pressing the Edit List button, you can find an item by typing its full or partial name in the speed search field. As you type, the letters appear in the speed search field (i.e., ne in Figure 4-2) and the items beginning with the letters you typed are displayed in the window.

Note: There is no insertion point in the speed search field. Just begin typing on the keyboard and the letters appear.

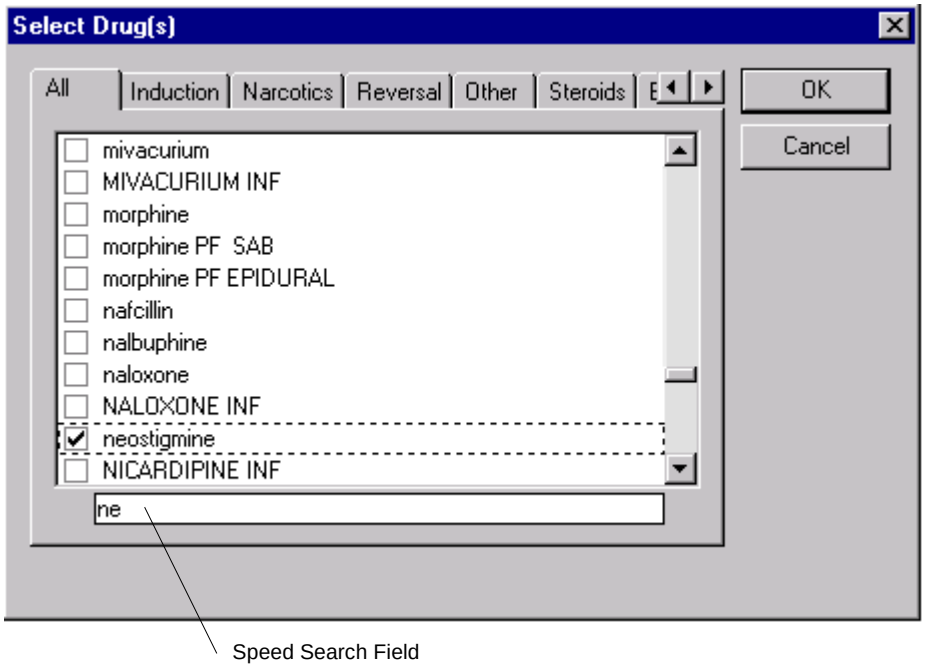

Figure 4-2. Creating an Environment: Selecting Drugs

When you select an item in the All tab, the item is selected automatically in the other tab(s) where it is listed. In the example in Figure 4-2, "neostigmine" is automatically checked in the "Reversal" tab, as shown in Figure 4-3.

3. When you are finished making selections, press the OK button to save them. Repeat step 2 for each list (i.e., Drugs, Fluids/Gases, Labs, etc.).

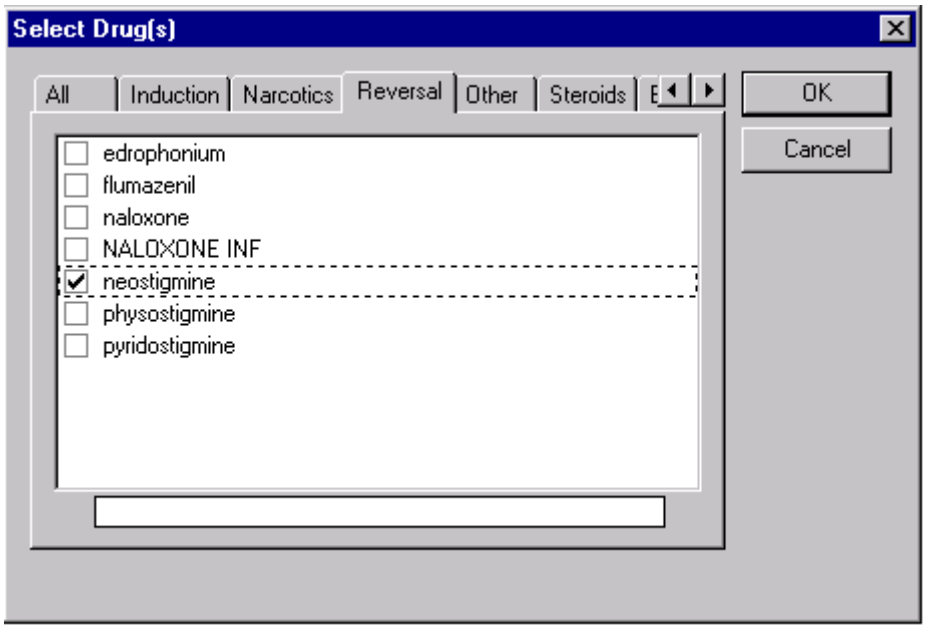

Figure 4-3. Selecting Drugs in the All Tab Automatically Checks Them in Other Tabs

4. After you create a list, use the following buttons (Figure 4-1 on page 4-2) to arrange the list in the order you want it. These items will appear in the Template tab of the Add diaolg boxes in the Recorder program in the same order as you arrange them here. Repeat this step for each list in the Templates section.

   - Select the Move Up button to move an item up in the list. Highlight the item, then select the button as many times as you need to reposition the item higher in the list.
   - Select the Move Down button to move an item down in the list. Highlight the item, then select the button as many times as you need to reposition the item lower in the list.
   - Select the Sort button to arrange the items in the list alphabetically. Highlight any item in the list and then select the Sort button.

5. When the lists are created and arranged as you want them, press the Save button on the toolbar. Or, select Save from the File menu.

   The Save Environment dialog box appears (Figure 4-4 on page 4-5).

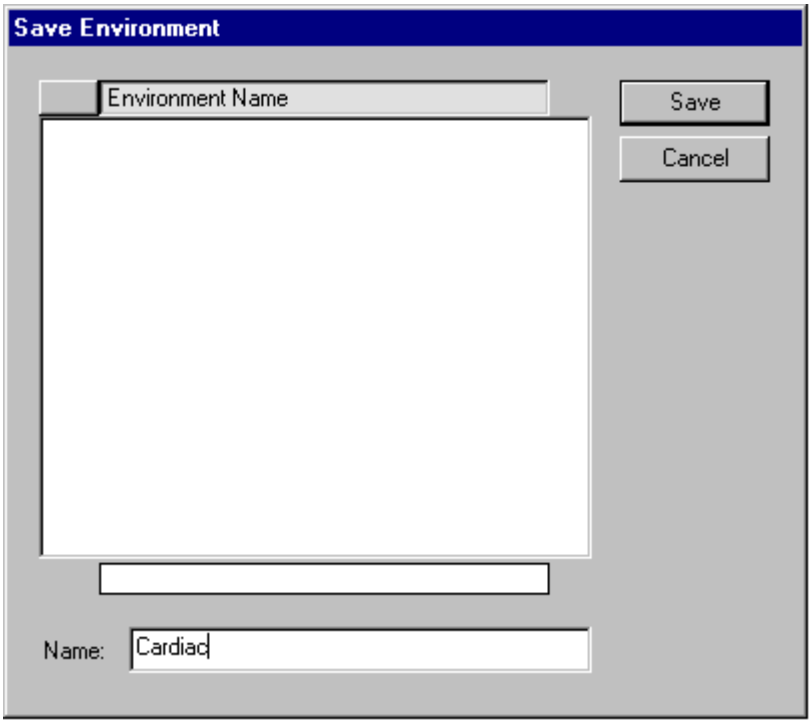

Figure 4-4. Save Environment Dialog Box

6. Type a name for the environment in the Name field.
7. Press the Save button. The environment is saved and can be accessed from any workstation on the network.

   Note: Once an environment is saved, the Save Environment dialog box does not appear again. If you want to rename the environment, see "Saving an Environment" on page 8-2 for more information.

Opening an Existing Environment

When you want to view or enter new data for an existing environment, open the environment by selecting it from the dialog box list.

Prerequisites

The following prerequisites apply to this function:

- You must be logged on to Environment Manager.
- The Environment Manager Main window must be displayed.
- The environment you want to open must not be open at any other workstation.

Note: Any user can view, copy, or load an environment, but only the author or owner of an environment, or the Saturn Administrator, can edit or delete it.

Procedure

Follow these steps to open an existing environment.

1. On the toolbar, press the Open button.

   – Or –
   On the File menu, choose Open.

   – Or –
   On the keyboard, press CTRL+O.

   The Select Environment dialog box appears (Figure 4-5).

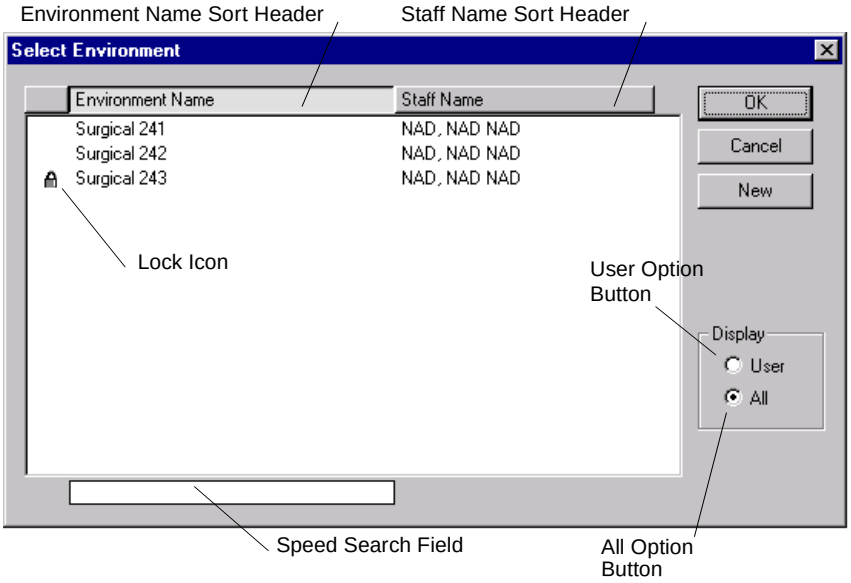

Figure 4-5. Opening an Environment Using the Select Environment Dialog Box

2. If the list of existing environments is long, use the buttons and fields described in Table 4-1 on page 4-8 to help you find an environment.

3. Select the environment you want to open and press the OK button. The Templates section is displayed for the selected environment (Figure 4-6 on page 4-7).
4. You can update information in the Template section or in another section (i.e., Defaults and Settings). Proceed to Section 5, Section 6, and Section 7 for details.

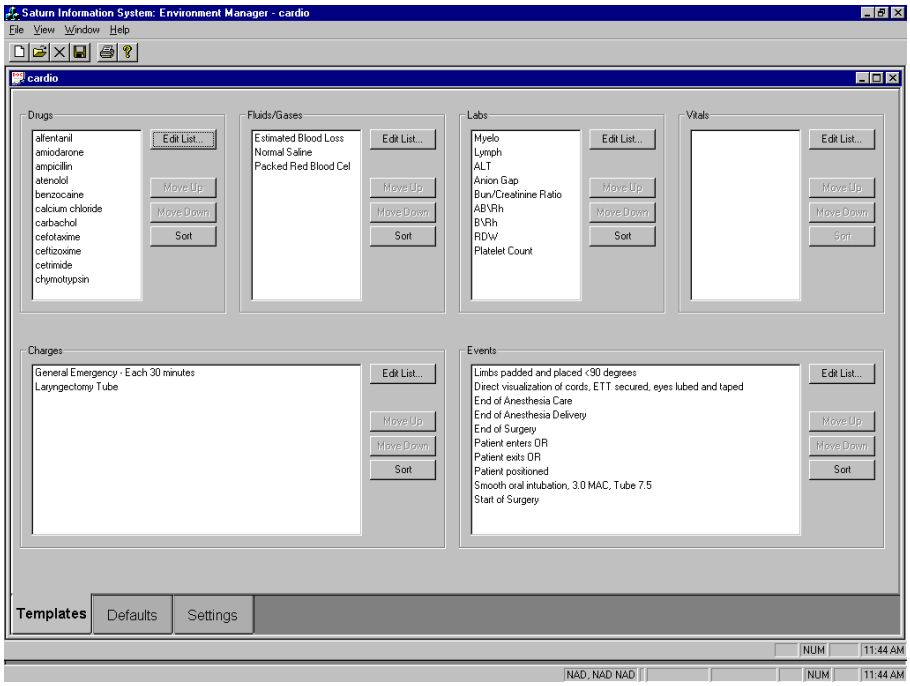

Figure 4-6. Template Section for an Existing Environment

Note: If the environment that you wish to open is listed with a lock icon appearing to its left (Figure 4-5 on page 4-6), the environment is already open at your workstation or at another workstation. If you try to open the environment, the "Selected environment is in use" message appears (Figure 4-7). Press the OK button.

Figure 4-7. Environment in Use

Table 4-1. SearchTools in the Select Environment Dialog Box

Search Tool	Definition
Speed Search	You can find an environment by typing the first few letters of its name. As you type, the letters appear in the speed search field while the list scrolls to items beginning with the letters you typed. *Note:* There is no insertion point in the speed search field. Just begin typing on the keyboard and the letters appear.
User Option Button	When you select the User option button, only your environments are displayed.
All Option Button	When you select the All option button, all site environments are displayed.
Environment Name Sort Header	When you select the Environment Name sort header, the environments are listed alphabetically by name. When you select it again, the items are listed alphabetically, but in reverse.
Staff Name Sort Header	When you select the Staff Name sort header, the environments are listed alphabetically by staff name. When you select it again, the items are listed alphabetically, but in reverse.

5

Modifying Templates

This section explains how to add, delete and rearrange template items.

Adding and Deleting Template Entries 5-2
Rearranging Template Entries 5-4

Adding and Deleting Template Entries

Use Environment Manager's Templates section to view and make edits (add and delete items) to Environment Manager lists. When you change the lists in an environment, the lists are also changed in the Template tab of Recorder's Add dialog boxes when this environment is used.

Note: Any user can view, copy, or load an environment, but only the author or owner of a template, or the Saturn Administrator, can edit or delete it.

Prerequisite

The environment you want to change must be opened. Refer to "Opening an Existing Environment" on page 4-6 for more information.

Procedure

Follow these steps to add or delete a list item in any of the template lists (i.e., Drugs, Fluids/Gases, etc.).

1. Press the Templates tab at the bottom of the Environment window.

   – Or –
   On the View menu, choose Templates.

   – Or –
   On the keyboard, press ALT, V, T.

   The Templates section appears (Figure 5-1).

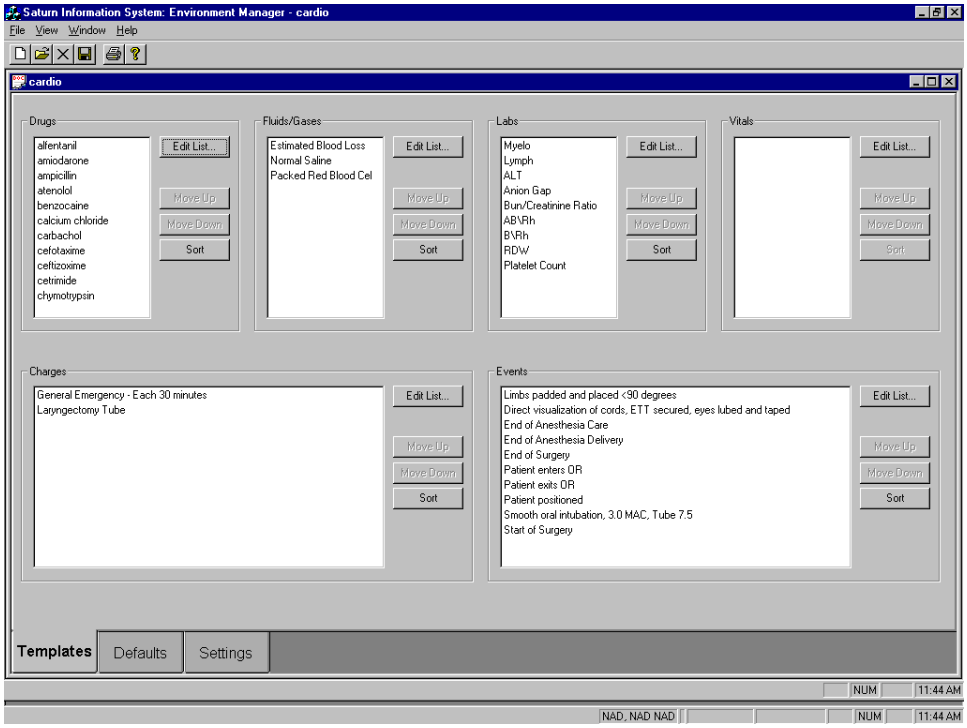

Figure 5-1. Template Section (Editing)

2. Press the Edit List button for the list that you want to add or edit items (i.e., Drugs, Fluids/Gases, etc.).

A selection dialog box appears and displays a complete list (i.e., All). Figure 5-2 shows the selection dialog box for charge items. Anesthesia Charges and Hospital Charges are sublists of the complete list of possible charges for this template. (Refer to "Templates Section" on page 2-13 for a description of each selection dialog box in the Templates section.)

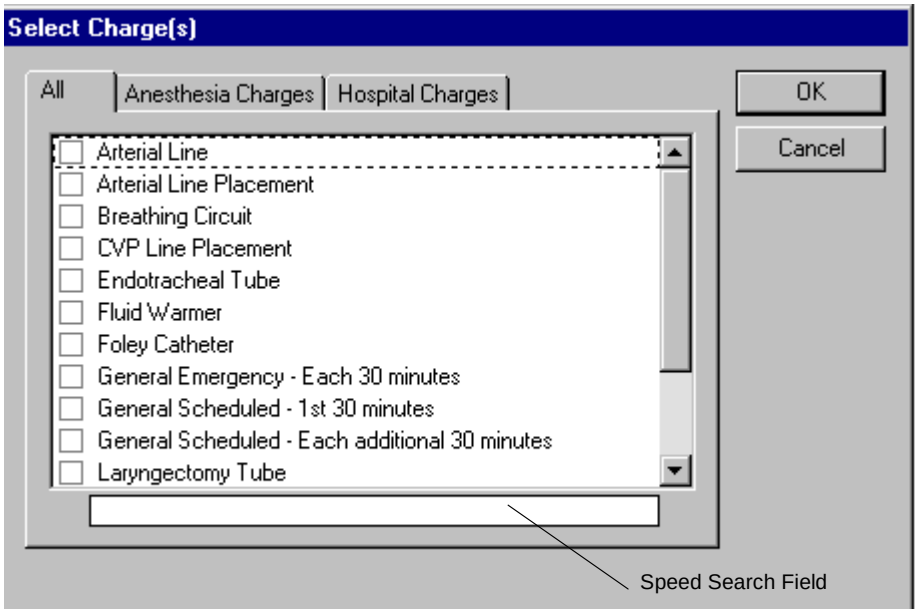

Figure 5-2. Select Charge(s) Dialog Box

3. You can find a list item by typing its full or partial name. As you type, the letters appear in the speed search field and displays items beginning with the letters you type.

   Note: There is no insertion point in the speed search field. Just begin typing on the keyboard and the letters appear.

4. Select list items that you want to add or delete from the sublists.

   - To add items to the Charges list (Figure 5-2), select the items in the "All" list so that the boxes are checked.
   - To delete items from the Charges list, deselect the items in the "All" list by clearing the boxes so they are no longer checked.

   Note: If you select or deselect a charge on the "All" list, it is automatically selected or deselected on all sublists (i.e., Anesthesia Charges and Hospital Charges) in any Select dialog box.

5. Press the OK button to save your changes, or press CANCEL to start over.

6. If you need to edit the Defaults or Settings section for this environment, proceed to the next sections. If you are finished editing, refer to "Saving an Environment" on page 8-2.

Rearranging Template Entries

If you want to rearrange the order of items in a window, use the MOVE UP, MOVE DOWN, and SORT buttons. When you rearrange list items in the Templates section, the items are also rearranged in the Template tab of the Recorder Add dialog boxes.

Prerequisite

The environment you want to change must be opened. Refer to "Opening an Existing Environment" on page 4-6 for more information.

Procedure

Perform these steps to rearrange template entries.

1. To move an item higher in a list, highlight the item. Then select the Move Up button as many times as you need to reposition the item higher in the list.
2. To move an item lower in a list, select the item. Then select the Move Down button as many times as you need to reposition the item lower in the list.
3. To sort items alphabetically, select any item in the list, and then press the SORT button.

6

Adding and Deleting Defaults

This section explains how to add and delete default items.

Adding and Deleting Default Entries..... 6-2
Chart Grid Items..... 6-2
Events & Charges..... 6-4

Adding and Deleting Default Entries

Use Environment Manager's Defaults section to view and edit default lists. These items (i.e., drugs, fluids, labs, vitals, charges, events, and Post-Op assessments, checks and scores) are automatically placed in a record when the environment is loaded in Recorder.

Note: Any user can view, copy, or load an environment, but only the author or owner of a template, or the Saturn Administrator, can edit or delete it.

Chart Grid Items

The drugs, fluids/gases, labs, and manual vitals you select are displayed in a single list in the Chart Grid Items area (Figure 6-1). The order you list them here is the same order in which they will be displayed on the grid of the Recorder Chart pages in the Holding, Intra-Op and Post-Op sections.

Note: Configuring default items for an environment does not allow for configuration of specific data entries for the case. For example, a drug can be added to the environment, but configuration of a dosage cannot be done. Dosages must be entered through the Recorder Add Drug dialog box.

Prerequisites

The environment you want to change must be open. Refer to "Opening an Existing Environment" on page 4-6 for details.

Procedure

1. Select the Defaults tab at the bottom of the Environment Manager window. The Grid Items page appears (Figure 6-1).

   – Or –

   On the View menu, choose Defaults and then Grid Items.

   – Or –

   On the keyboard, type ALT, V, D, G.

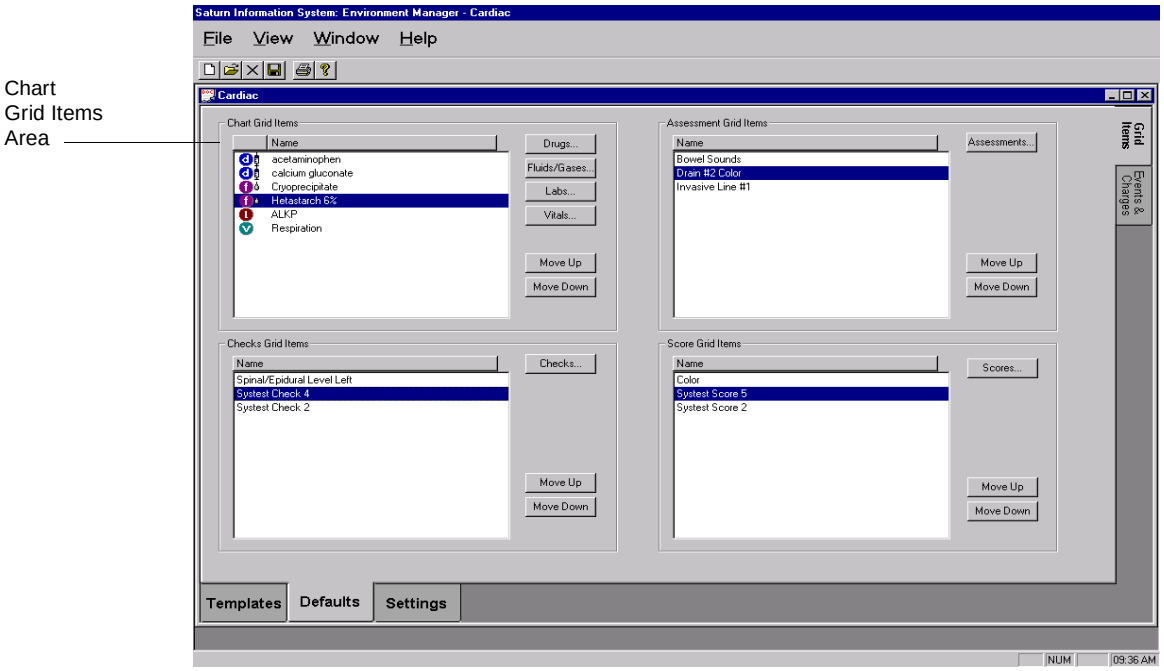

Figure 6-1. Defaults Section, Grid Items Page

2. In the Chart Grid Items area, press or click a button (Drugs, etc.). A Select dialog box appears (Figure 6-2).
3. Select or deselect items in the list by clicking on the check boxes. Selecting (or clearing) items on the All tab automatically selects (or clears) them on the other tabs (i.e., Induction, Narcotics, etc.).

   Note: You can find a list item by typing its full or partial name. As you type, the letters appear in the speed search field (Figure 6-2) and items beginning with the letters you type are displayed. There is no insertion point in the speed search field. Just begin typing on the keyboard and the letters appear.

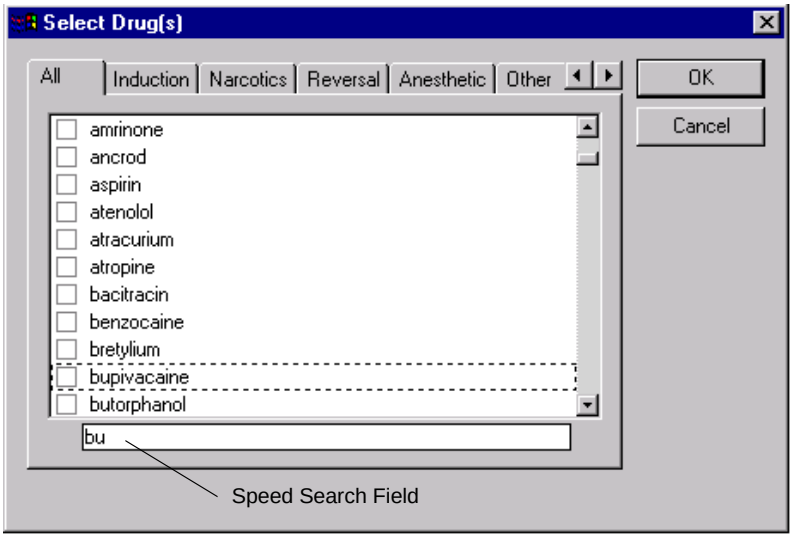

Figure 6-2. Selecting Drugs on the Grid Items Page

4. When you finish making selections, press the OK button to save the changes.
5. Repeat steps 2 and 3 for each button in the Chart Grid Items area (i.e., Fluids, Labs, and Vitals).
6. If you want to rearrange the order of items in the Chart Grid Items window, use the Move Up and Move Down buttons as follows:
   - To move an item higher in the list, highlight the item. Then select the Move Up button as many times as you need to reposition it higher in the list.
   - To move an item lower in the list, highlight the item. Then select the Move Down button as many times as you need to reposition it lower in the list.
7. In the Checks Grid Items area, click or press the Checks button. Repeat steps 3, 4, and 6.
8. In the Assessment Grid Items area, click or press the Assessments button. Repeat steps 3, 4, and 6.
9. In the Score Grid Items area, click or press the Score button. Repeat steps 3, 4, and 6.

10. Select Save on the File menu to save all the default changes.

Events & Charges

Besides selecting charges and events for an environment, you can press the Offset button on the Events & Charges page to configure these items with an offset time in minutes (-60 to 60) from some triggering event (i.e., the Start Record or End Record time). When the triggering event is added to the record in the Recorder program, any default events and/or charges are also entered and are offset in time from this triggering event. If no value is selected in the "minutes from" field, the default is 0 (i.e., it is recorded at the same time as the triggering event).

Prerequisite

The environment you want to change must be open. Refer to "Opening an Existing Environment" on page 4-6 for details.

Procedure

Follow these steps to add or delete default charges and events in an environment.

1. Press the Defaults tab at the bottom of the Environment window, and then press the Events & Charges tab.

   – Or –

   On the View menu, choose Defaults and then Events & Charges.

   – Or –

   On the keyboard, type ALT, V, D, E.

   The Events & Charges page appears (Figure 6-3).

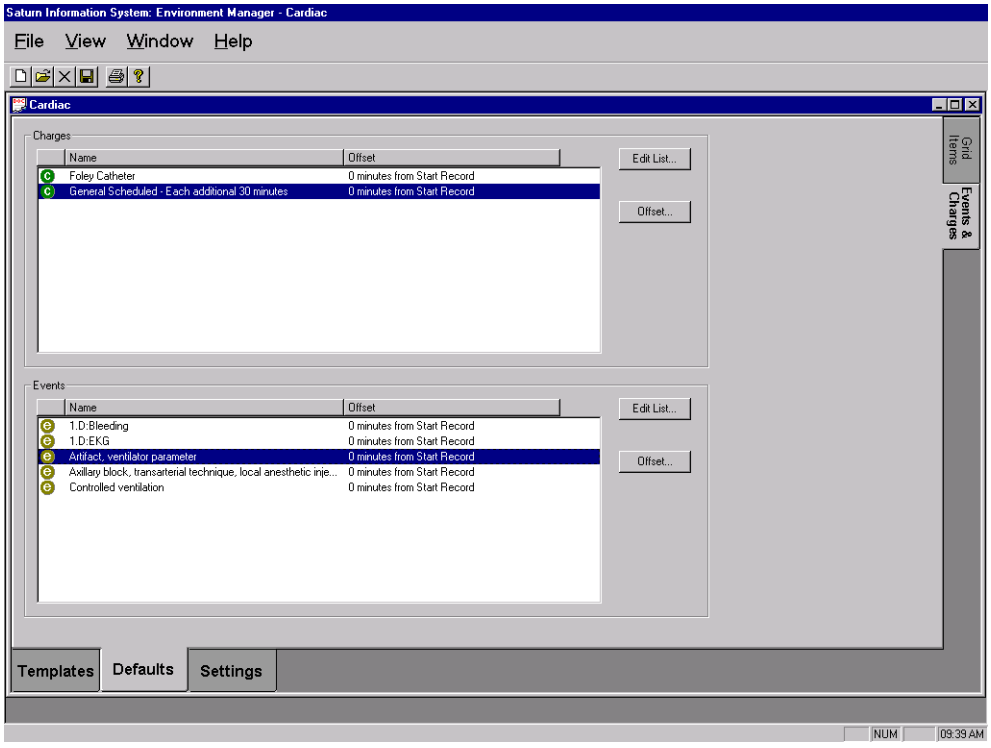

Figure 6-3. Defaults Section, Events & Charges Page

2. In the Charges area, press or click the Edit List button. The Select Charges dialog box appears.

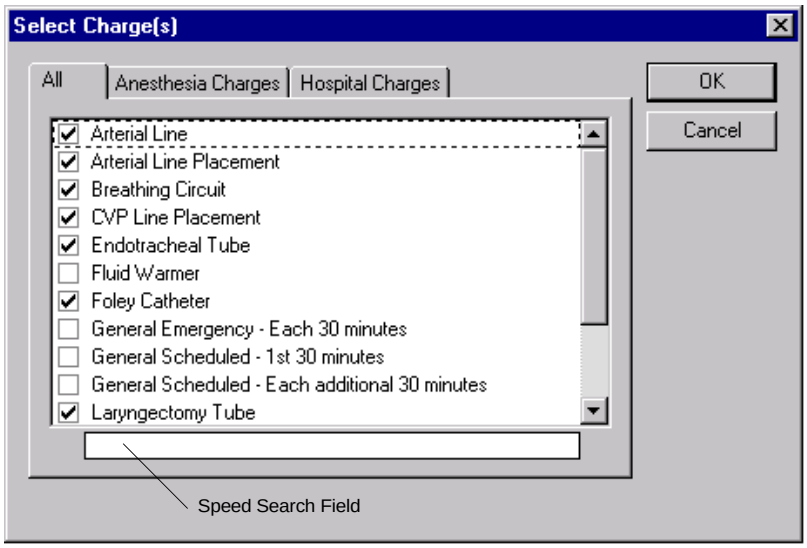

Figure 6-4. Select Charge(s) Dialog Box

3. Select or deselect items in the list by clicking on the check boxes. Selecting (or clearing) items on the All tab automatically selects (or clears) them on the other tabs (i.e., Anesthesia Charges and Hospital Charges).

   Note: You can find a list item by typing its full or partial name. As you type, the letters appear in the speed search field (Figure 6-4) and items beginning with the letters you type are displayed. There is no insertion point in the speed search field. Just begin typing on the keyboard and the letters appear.

4. When you finish making selections, press the OK button to save the changes.

5. To configure a default charge item with an offset time, select an item in the Charges window and then press the Offset button. The Select Offset dialog box appears (Figure 6-5).

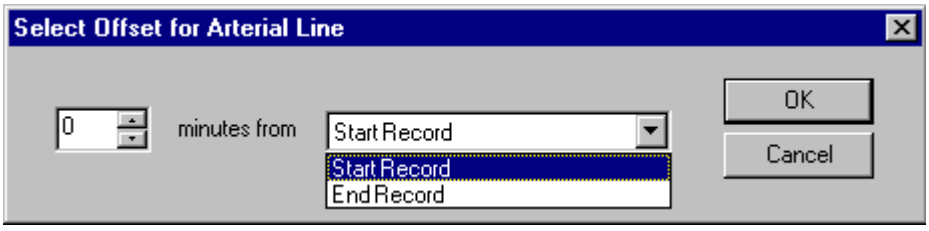

Figure 6-5. Select Offset Dialog Box

6. Select the number of minutes in the minutes box by pressing the up or down arrows.

   Note: The up arrow increases the number of minutes, and the down arrow decreases the number of minutes. The range allowed is -60 to +60.

7. Select Start Record or End Record in the event box.

   Example: A warming blanket charge is entered and given an offset time of 30 minutes prior to (i.e., -30) the Start Record time.

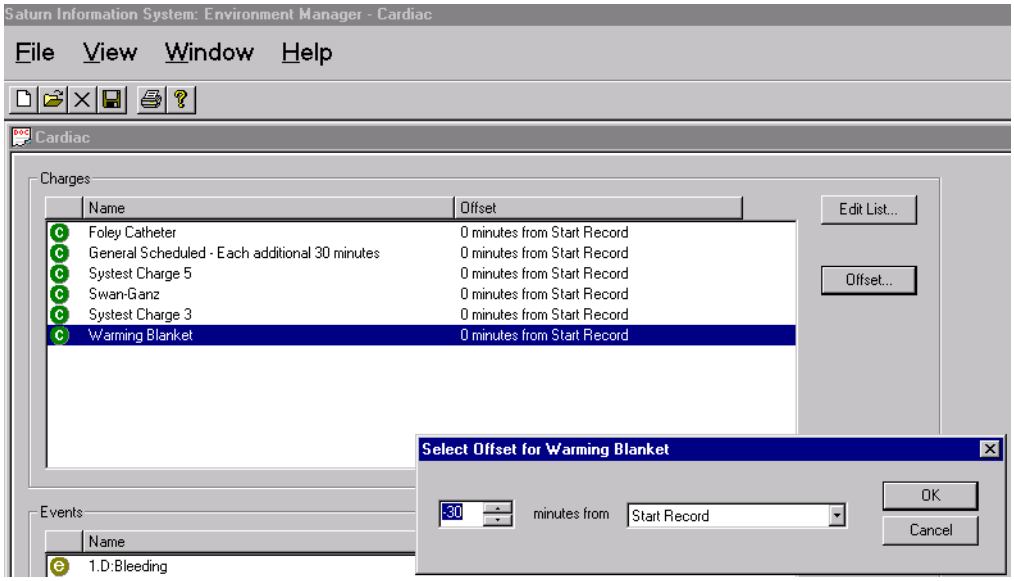

Figure 6-6. Charge Offset Time (Example)

8. Select Save on the File menu to save the changes.

7

Modifying Settings

This section explains how to add and modify setting entries.

Modifying Settings 7-2

Modifying Settings

Use Environment Manager's Settings section to select or change the Grid Section, Time Scale, and Graph Section of the Chart pages in the Recorder program. These settings will take effect when the environment is loaded in the Recorder program.

Default settings are selected each time you create a new environment. However, you can deselect or change these settings as needed. These defaults are specified in Table 7-1 on page 7-4.

Note: Any user can view, copy, or load an environment, but only the author or owner of a template, or the Saturn Administrator, can edit or delete it.

Prerequisite

The environment you want to change must be open. Refer to "Opening an Existing Environment" on page 4-6 for details.

Procedure

Follow these steps to select or edit settings.

1. Press the Settings tab at the bottom of the Environment window.

   – Or –
   On the View menu, choose Settings.

   – Or –
   On the keyboard, press ALT, V, S.

   The Settings section appears (Figure 7-1).

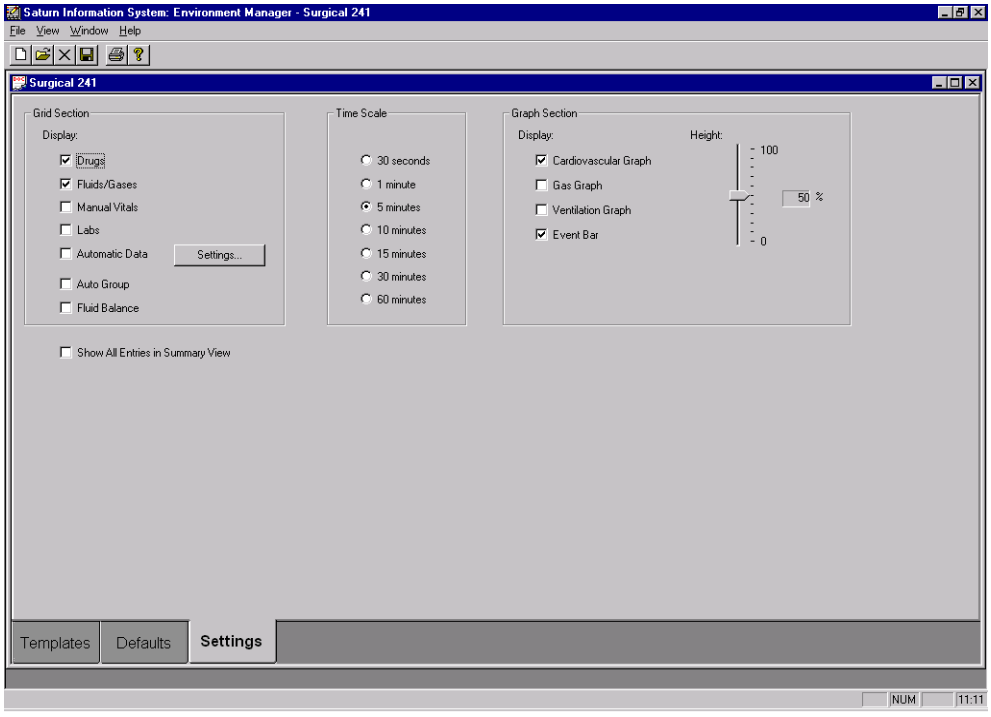

Figure 7-1. Settings Section (Default Settings are Checked)

2. In the Grid Section, do the following:

- Select check boxes of the items (Drugs, Fluids, Manual Vitals, and Labs) you want displayed in the grid section of the Recorder Chart pages.
- Check the Automatic Data check box to select the data you want displayed in the grid section of the Recorder Chart pages. The Settings button is enabled. Select the Settings button and then the tab (Cardiovascular, Gas, Ventilation) which lists the data you want to change (Figure 7-2).

  If you check a box next to the plus (+) sign, all the items in the sublist are selected (Figure 7-2). (When you click the plus (+) sign, it changes to a minus (-) sign.) If you only want specific items in a list displayed, select the plus (+) sign and then check only the items to be displayed.

  Note: If you clear a box next to the plus (+) sign, all items in the sublist are deselected (Figure 7-2).

  To deselect an item from being automatically monitored, clear the box so that it is no longer checked.

  Repeat for each tab, then press the OK button when you are finished, or press CANCEL to start over.

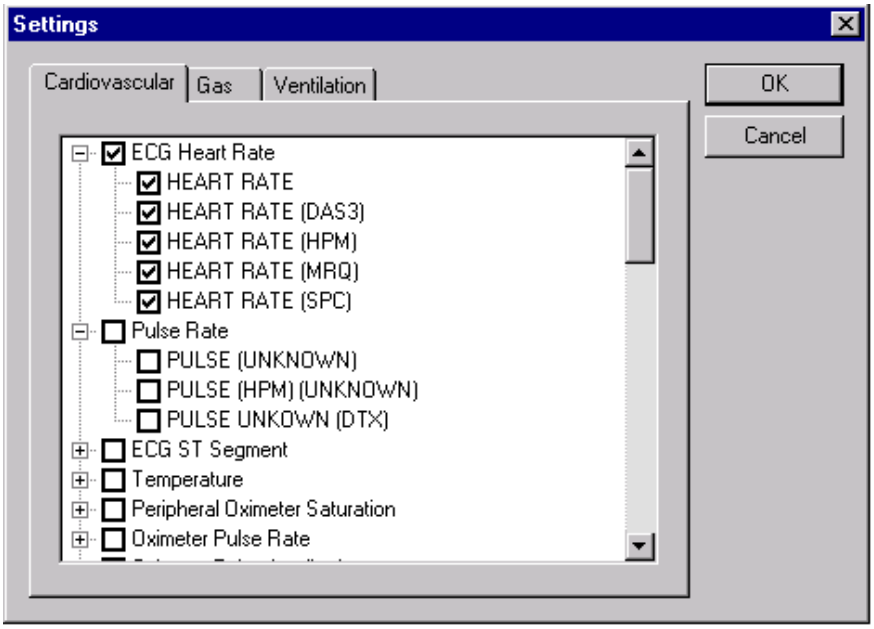

Figure 7-2. Settings Dialog Box

- Check the Auto Group box if you want to group items according to their icon images for drugs, fluids/gases, charges, etc.
- Check the Fluid Balance box to split the grid in two sections on the Chart pages of the Recorder program. The bottom section of the grid will reflect data related to fluid balance only.
- Check the Show All Entries in Summary View box to have all data type entries reflected on the Summary pages of the Holding, Intra-Op and Post-Op sections of the Recorder program.

3. In the Time Scale section, select option buttons to display time intervals (30 seconds, 1 minute, 5 minutes, 10 minutes, 15 minutes, 30 minutes or 60 minutes) on the grid section of the Recorder program's Chart pages.
4. In the Graph Section, do the following:
   - In the Display area, select check boxes next to the types of graphs you want displayed (i.e., cardiovascular, gas, ventilation) on the Chart pages of the Recorder program.
   - In the Display area, select the Event Bar if you want events displayed on a separate bar on the Recorder program's Chart pages that indicates events by color codes.
   - In the Height area, select the height (a percentage of the total screen) for the graphic section of the Recorder program's Chart pages by clicking and moving the slide bar with the mouse, or selecting the field and entering a value on the keyboard
5. If you need to edit other sections (i.e., Templates or Defaults) for this environment, proceed to those sections. If you are finished editing, see "Saving an Environment" on page 8-2.

Table 7-1. Defaults in the Settings Section

Setting Area	Defaults
Grid Section	*Default:* Drugs and Fluids/Gases are checked. All other options are not checked. You can select as many check boxes as needed.
Time Scale	*Default:* 5 minutes option button is selected. Only one option button can be selected.
Graph Section	*Default:* Cardiovascular Graph and Event Bar are checked. All other options are not checked. You can select as many check boxes as needed.
Height	*Default:* The Height slider is set to 50 percent. (This means the graph section will take about 50 percent of the screen.) You can press the up and down arrow keys to increase or decrease the percentage.
Show All Entries in Summary View	Indicates that all data type entries (i.e., including those entered in between recording times) will be reflected on the Summary pages of the Holding, Intra-Op and Post-Op sections of Recorder. *Default:* Not checked

8

Last Steps with Environment Manager

This section explains how to save Saturn Information System environments, how to print those environments, and how to exit Environment Manager.

Saving an Environment 8-2
Deleting an Environment 8-3
Closing an Environment 8-4
Exiting Environment Manager 8-5

Saving an Environment

Once you create a new environment or edit an existing environment, save it so that it can be used by all users of the the Saturn Information System.

Since configuration data is not saved automatically, you need to save it when you create it or make changes to it. When environment data is saved, the user ID of the session is saved as the "owner" of the environment. If the system administrator edits an environment that is owned by another user, the original owner still retains ownership after the changes are saved by the administrator.

Procedure

To save changes made to an existing environment, follow the procedure for the input device you are using:

Touch Screen	Tap the Save icon on the toolbar. Or tap Save from the File menu.
Mouse	Click the Save icon on the toolbar. Or click Save from the File menu.
Keyboard	Type ALT, F, S. Or type CTRL+S.

Note: If you are saving an environment for the first time, the Save Environment dialog box appears (Figure 8-1). Go to step 2 in the next procedure. If you are saving a pre-existing environment to which you have made changes, this dialog box does not appear.

Procedure

To save a new or already existing environment with a new name, follow this procedure:

1. On the File menu, choose Save As.

   The Save Environment dialog box appears (Figure 8-1).

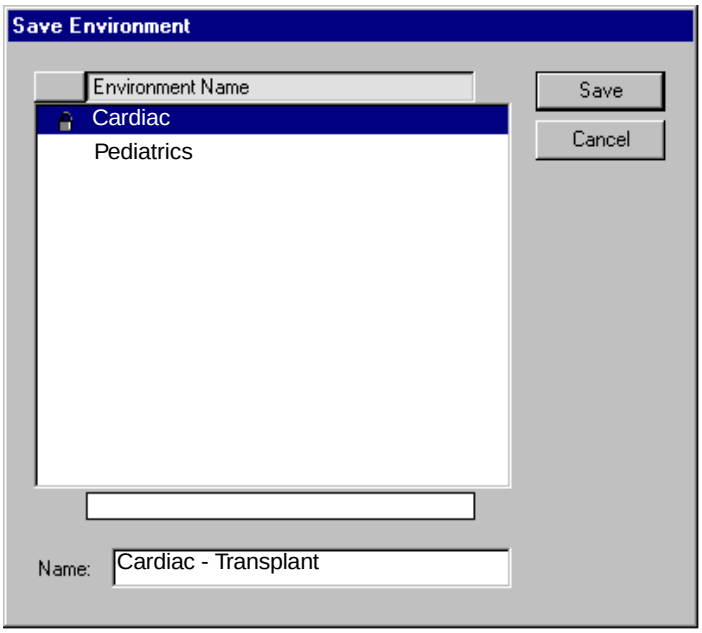

Figure 8-1. Save Environment Dialog Box

2. Type a (new) name for the environment in the Name field.
3. Press the Save button. The environment is saved and may be accessed from any workstation on the network.

Deleting an Environment

Any user can view, copy, or load an environment, but only the author or owner of a template, or the Saturn Administrator, can delete it. An environment that is open and in use cannot be deleted.

Prerequisite Before you delete an environment, it must be closed and not in use by any users.

Procedure To delete an environment, perform the following procedure.

1. On the File menu, choose Delete.

   – Or –
   On the toolbar, select the Delete button.

   – Or –
   On the keyboard, type CTRL+D.

   The Select Environment dialog box appears with a list of all environments "owned" by the current user (Figure 8-2).

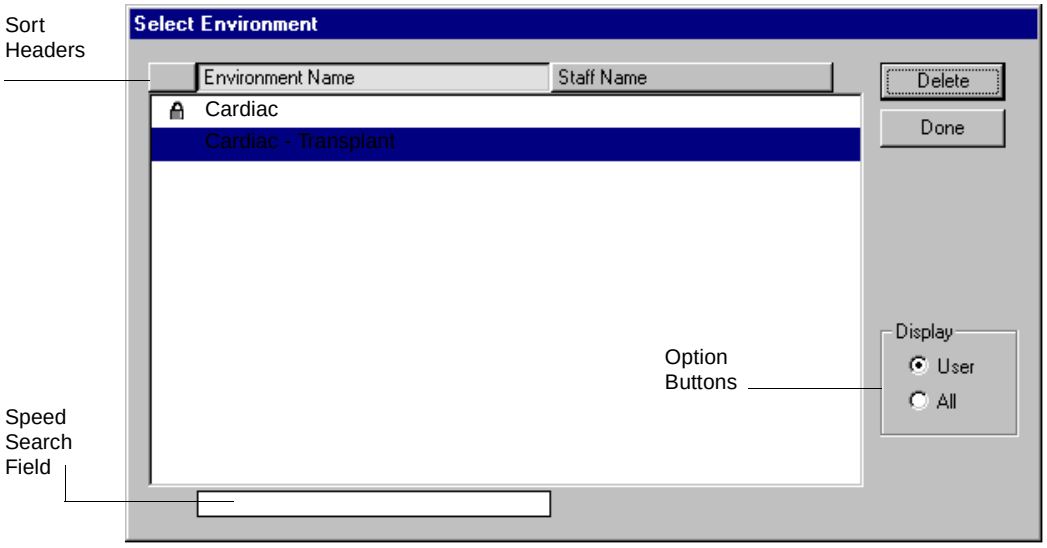

Figure 8-2. Select Environment Dialog Box (Delete Environment)

2. Select the environment you want to delete. If the list is long, you can use the search tools (i.e., sort headers, speed search, etc.) described in Table 4-1 on page 4-8 to help you find it.
3. Select an environment, and then press the Delete button. A message appears (Figure 8-3). Select YES to delete it. The environment is removed from the database.

Note: If the environment that you wish to delete is listed with a lock icon appearing next to it, the environment is already open at your workstation or at another workstation. If you try to delete the environment, the Environment in Use dialog box appears (Figure 8-3 on page 8-4). You can delete it only when it is not in use. Press the OK button.

Figure 8-3. Environment in Use

4. Press the Done button in the Select Environment dialog box when you are finished deleting environments.

Closing an Environment

Prerequisite Before you delete an environment, it must be closed and not in use by any users.

Procedure To close an environment, perform the following procedure.

1. On the File menu, choose Close.

   – Or –
   On the toolbar, select the Delete button.

   – Or –
   On the keyboard, type ALT, F, C.

2. If you have not yet saved your changes, go to step 2 in "Exiting Environment Manager" on page 8-5.

Exiting Environment Manager

When you have finished creating and editing environments, saving your changes, and printing your environment reports, you can exit Environment Manager.

Prerequisite All environments should be closed before exiting the application.

Procedure

1. To exit Environment Manager, follow the procedure for the input device you are using:

Touch Screen	Double-tap the Control menu icon on the title bar (Figure 8-4) of each opened environment, or tap the File menu and tap Exit.
Mouse	Double-click the Control menu icon on the title bars of each opened environment (Figure 8-4), or click the File menu and then click Exit.
Keyboard	Type ALT, F, E to select Exit from the File menu.

Figure 8-4. Control Menu Icon

2. If any environments are open with unsaved data when you try to exit Environment Manager, you are prompted to save the data for each environment before it is closed, as shown in Figure 8-5 below.
   - If you press Yes, data is saved for the specified environment.
   - If you press No, the changes are discarded.
   - If you press Cancel, the environment remains open with the changes still intact, but the exit request is cancelled.

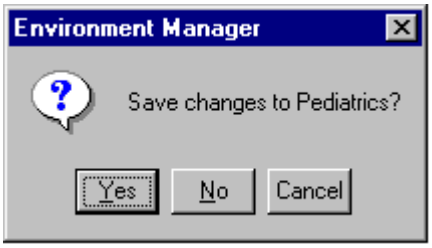

Figure 8-5. Exit Save Prompt

After you press Yes or No for each open environment, the Environment Manager program closes.

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1

Introducing Case Manager

This section introduces you to the Case Manager application.

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What Is Case Manager?

Case Manager is a software application for the Saturn Administrator for managing patient case files that are created in the Saturn Recorder application. In essence, it allows the Saturn Administrator to delete, restore, archive, and purge patient case files.

Note: It is the Saturn Administrator's responsibility to establish the level of security and training to ensure the authenticity, integrity, and confidentiality of the electronic records.

A Windows NT and Windows 2000 Application

Case Manager operates on personal computers under the Microsoft® Windows NT® and Windows 2000® operating systems. Saturn Administrators who have experience using Windows NT, Windows 95®, or Windows 2000 will find that the application works like any other Windows-based application. Administrators and users will also find many familiar Windows features in the Case Manager interface.

Part of the Saturn Information System

Case Manager is part of the larger Saturn Information System, which also includes the Recorder, List Manager, Environment Manager, and Report Manager applications. See Section 1, Introducing the Administrator's Guide, for a description of each of these Saturn applications.

Installation

Case Manager can be installed on any nonclinical workstation configured as part of the Saturn Information System. Because it accesses data from the server database, it does not require a local database.

Note: If the remote database access capability has not been installed, the Case Manager will indicate an error and terminate.

What's New in Case Manager

The following new feature has been added to Version 4.1 of Case Manager:

- Case Summary reports now include a column that lists staff electronic signatures for events, as well as the time the signatures were entered. See Section 2.

The following list describes new features in Version 4 of Case Manager:

- A Purge button has been added to the Case Manager toolbar, which allows you to permanently remove cases from the Saturn database. Refer to "Purging Patient Cases" on page 2-21 for details.
- You can select a date range and other filters that determine which cases appear in a patient case list in the Main window. Refer to "Generating a Case List" on page 2-11 for details.
- Case Summary reports now show the first Start of Anesthesia Care and last End of Anesthesia Care event times in the report header (Figure 2-26 on page 2-23). In addition, the sum of these event intervals (assuming these events are entered more than once in a case) is displayed in the report header (Total), providing the total actual anesthesia time of the case.

Where Do I Use Case Manager?

You can use Case Manager on any PC or workstation in your hospital that is connected to the information systems network and meets certain minimum hardware requirements. It is configured on a nonclinical workstation and runs as a stand-alone application.

The Network

Case Manager operates in an information systems network with a centralized database. You can access and update patient case data from any nonclinical workstation or PC that is part of the network. Refer to Figure 1-1. The Saturn Information System Network on page 1-4 in Introducing the Administrator's Guide in this manual for a look at the Saturn network environment.

Workstations

A Saturn workstation is a PC/AT-compatible computer that meets certain minimum hardware requirements. Case Manager is configured on a nonclinical workstation and may be operated using a mouse and/or keyboard.

How Do I Use This Manual?

This manual explains how to use the Case Manager application.

Manual Organization

The manual is organized sequentially to mirror the steps you might take in a typical situation. However, because no user or situation is truly typical, you can skip around in both the application and the manual.

Conventions

This manual uses standard typographical and keyboard conventions to help you interpret the information presented. These conventions are described in the following table.

Table 1-1. Typographical and Keyboard Conventions

Convention	Used For	Example
Helvetica Type	Window controls, such as entry fields, menu options, and toolbar buttons.	In the Last field, enter the patient's last name.
Small Capitals	Keyboard keys.	To display a menu, press the ALT key, then the underlined letter in the menu name.
Italics	A generic data description, for which you or the system substitutes a specific value.	Enter the time in *hh:mm* format.
Monospace Type	Messages displayed by the system.	If you receive the message **Case in Use**, the case is already open.

Table 1-1. Typographical and Keyboard Conventions

Convention	Used For	Example
Comma (,) between key names	Keyboard keys that you press one after the other. (Press the first key and release it. Then press the second key and release it.)	To display the File menu, press ALT, F.
Plus sign (+) between key names	Keyboard keys that you press simultaneously. (Press the first key and, while holding it, press the second key. Then release both keys.)	Press the TAB key (SHIFT+TAB to move backward) until the button is highlighted.

2

Using Case Manager

This section describes how to start, use, print reports in, and exit Case Manager.

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Security

Case Manager is available on nonclinical workstations as a stand-alone application. The Saturn Information System provides a level of security that ensures only authorized users are able to access the Case Manager program.

Access to Case Manager

Logon security controls access to Case Manager. The Saturn Administrator assigns a user ID, password, and security level to each person in the Saturn Information System, and only users with a recognized ID and password combination can log on to Case Manager. Refer to Figure 4-52 on page 33 in Section 4 of the List Manager User's Guide for further information.

Starting Case Manager

Before you can use Case Manager, you must log on.

Prerequisites

The following prerequisites apply before starting Case Manager:

- You must be an authorized Case Manager user and have a valid user ID and password. The password is case sensitive, so make sure you know which letters are uppercase and which are lowercase.
- You must be at a nonclinical workstation.

Procedure

Follow these steps to log on to Case Manager.

1. To start Case Manager at a nonclinical workstation, follow the procedure for the input device you are using:

   Note: Nonclinical workstations are not configured with touch screen devices.

Mouse	Double-click the Case Manager icon on the Windows NT desktop. Or, select Programs, then Saturn, then Case Manager from the Start button on the Windows NT desktop.
Keyboard	With the ARROW keys, select the Case Manager icon on the Windows NT desktop, and then press the ENTER key.

   The Logon dialog box appears (Figure 2-1).

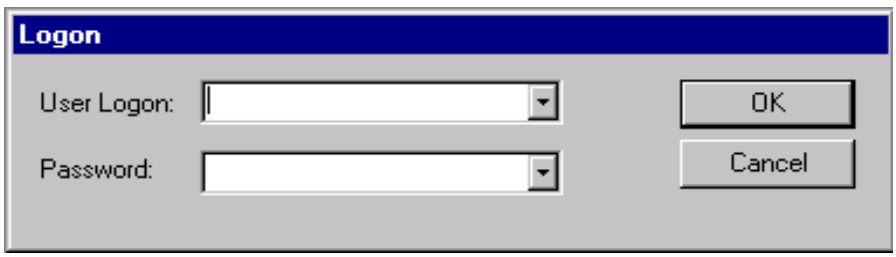

Figure 2-1. Logon Dialog Box

2. In the User Logon box, select or type your user ID.

3. In the Password box, type your password. Make sure to type all letters in the correct case. For security purposes, asterisks are displayed instead of the password as you type.
4. Select the OK button. The Case Manager Main window appears (Figure 2-2). You are now logged on to Case Manager.

   Note: The case list shown in Figure 2-2 is comprised of today's cases only. A list of patient cases prior to or later than today's date can be generated by selecting the Filters button. See "Generating a Case List" on page 2-11 for details.

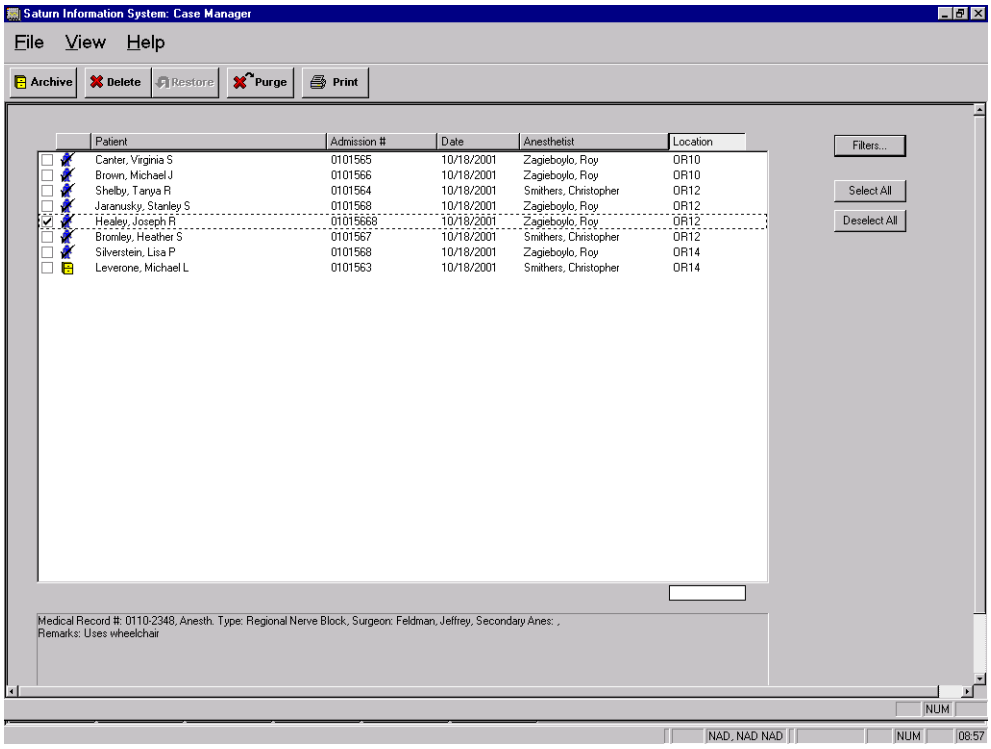

Figure 2-2. Case Manager Main Window

Case Types and Icons

The name of each case in the list is preceded by an icon that describes the case type. The following icons represent the different types of cases that can appear in a case list.

Pre-Op

The Pre-Op icon is associated with a case in which patient data has been entered, but the case is not yet complete.

Figure 2-3. Pre-Op Icon

In Progress

The Case in Progress icon is associated with a case that is open and recording.

Figure 2-4. Case in Progress Icon

Post-Op

The Post-Op icon is associated with a case where surgery is finished, the data has been recorded, and the case is closed.

Figure 2-5. Post-Op Icon

Archived

The Archived Case icon is associated with a case that is closed and has been moved out of the main database to an archived database.

Figure 2-6. Archived Case Icon

Cancelled

The Cancelled Case icon is associated with a case that was begun and then was cancelled.

Figure 2-7. Cancelled Case Icon

Locked

The Locked Case icon appears next to another icon of a case that is open on another workstation, and thus only can be viewed (i.e., read-only). In Figure 2-8, the Locked Case icon appears next to a closed case (Post-Op icon).

Figure 2-8. Locked Case Icon

Main Window Features

Case Manager provides a graphical user interface in its Main window that makes it easy to delete and restore the patient cases that are created in the Recorder application. Its use of standard Windows-type features provides a familiar look and feel for users who are familiar with other Windows-based programs.

Main Window

When Case Manager is running, its Main window is displayed (Figure 2-9). Because the Main window is always open, its title bar, menu bar, toolbar, and status bar are always accessible from this window.

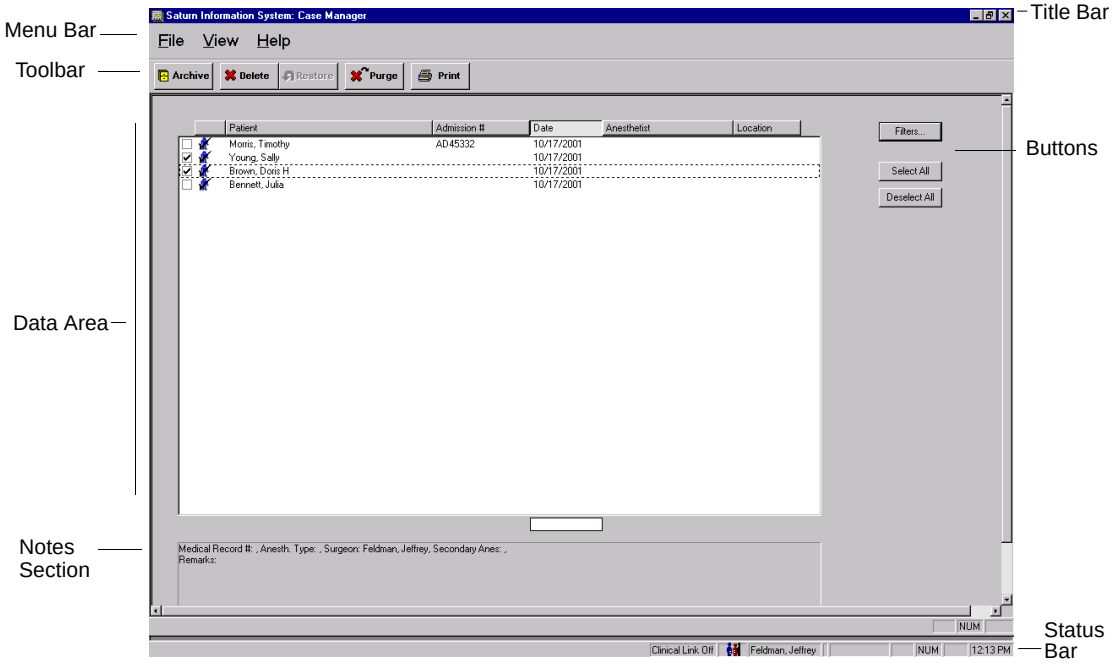

Figure 2-9. Main Window Features

Title Bar

The title bar (Figure 2-9) identifies the Case Manager application. If a case is open, the title bar also includes the name of the patient. The minimize/maximize/exit buttons in the title bar operate the same way as in any Windows-based application.

Minimize/ Maximize/Close Buttons

When you press the minimize button in the title bar (see Figure 2-9 on page 2-5), the Case Manager Main window shrinks to the status bar of Recorder, and the Recorder Main window appears (or the desktop or other application). To maximize Case Manager again, click the Saturn Information System icon on the status bar. Or, select Environment Manager from the Utilities menu in the Recorder program.

Menu Bar

The menu bar (Figure 2-9) contains individual menus (Table 2-1) that, when opened, contain items or selections that you can choose to initiate an action. For example, the selections on the File menu let you archive, delete, restore, purge, print, and preview a patient case, as well as exit the Case Manager program.

Table 2-1. Case Manager Menu Items

Menu Name	Menu Item	Description
File	Archive	Changes the status of a case to "archived." Archived cases appear in the Saturn Information System application's Main window unless you delete them (see Delete below). Archived cases are considered closed and sealed. However, these cases can be reopened and returned to an active status in the Recorder program.
	Delete	Changes the status of a case to "deleted." Deleted cases are indicated by a red X and are hidden from the user's view in other Saturn Information System applications. Deleted cases can be restored (see Restore below).
	Restore	Restores a patient case (that has been deleted) to an active status in the Main window (the red X is removed). Cases that display a black check mark (case is open but may or may not be recording data) or a red check mark (case may have already recorded data but is now closed) are considered active.
	Purge	Permanently erases a case. The case first must be deleted (see Delete above). All deleted cases (i.e., those with a red X next to them) will be erased when performing the purge function, unless you first restore them (see Restore above).
	Print	Prints the selected case's Summary report to the specified printer.
	Print Preview	Provides you with a preview of the printed case Summary report before you print it.
	Exit	Exits you from Case Manager.
View	Toolbar	Lets you choose whether or not the toolbar is displayed.
	Status Bar	Lets you choose whether or not the status bar is displayed.
Help	About Case Manager	Displays the About dialog box which displays Case Manager's name, release number, and copyright information.

Choosing a Menu Item

Use the method in Table 2-2 that corresponds to your input device to choose or select a menu item.

Table 2-2. Choosing a Menu Item

Input Device	Method
Mouse	On the menu bar, click a menu name to display its options. Then click a menu item (Archive, Delete, etc.).
Keyboard	To display a menu, press the ALT key and then the key that corresponds to the underlined letter in the menu name. When the menu appears, do one of the following: • Press the UP or DOWN ARROW key to highlight an item, then press the ENTER key. • Press the key that corresponds to the underlined letter in an item name (i.e., press P for Print). *Example:* You want to choose the Archive option on the File menu. Press ALT and then F (ALT, F) to display the File menu. Then, either press the A key, or highlight Archive and press ENTER.

Toolbar

The toolbar (Figure 2-10) is located just beneath the menu bar. The buttons on the toolbar duplicate the functionality of several items on the File menu (Archive, Delete, Restore, Purge and Print). They give you ready access to functions that you use frequently or need to implement quickly. When the buttons are available for use, they have dark text and graphics, as shown in Figure 2-10. Buttons that are not available for use have light text and graphics.

To activate these buttons, you must select (highlight) a case in the Case Manager Main window.

Figure 2-10. Case Manager Toolbar

Pressing a Toolbar Button

Use the method in Table 2-3 that corresponds to your input device to press a toolbar button.

Table 2-3. Pressing a Toolbar Button

Input Device	Method
Mouse	Click the button.
Keyboard	All toolbar buttons duplicate items on the File menu, where you can select them using the keyboard (see Table 2-2 on page 2-7). These menu items also have keyboard shortcuts (pressing ALT and the underlined letter, such as ALT, F, P to print a case summary). The print function also has accelerator keys (CTRL+P), which allows you to print without exiting and re-entering the case. The accelerator keys are displayed to the right of the Print option on the File menu. **Toolbar Button** — **Menu Item/Keyboard/Accelerator** Archive — File:Archive/ALT, F, A Delete — File:Delete/ALT, F, D Restore — File:Restore/ALT, F, R Purge — File:Purge/ALT, F, U Print — File:Print/ALT, F, P/CTRL+P

Filters Button

The Filters button displays the Select Filter dialog box (Figure 2-11), which lets you choose which cases are displayed in the Case Manager Main window.

Refer to "Generating a Case List" on page 2-11 for more information.

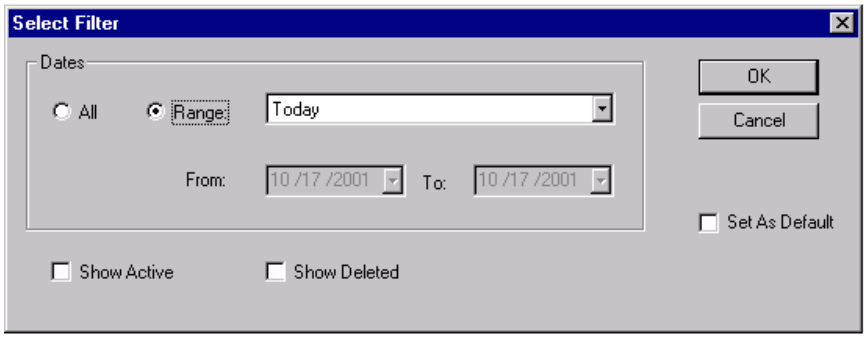

Figure 2-11. The Select Filter Dialog Box

Select All Button

The Select All button (Figure 2-12 on page 2-10) lets you select all of the cases in the Main window at once. Each check box next to each case is checked when you select this button.

Deselect All Button

The Deselect All button (Figure 2-12 on page 2-10) lets you deselect all of the cases in the Main window at once. Each check box next to each case is cleared when you select this button.

Sort Headers

The Case Manager Main window provides sort headers (Figure 2-12 on page 2-10) that allow you to change the order of the case list. Sort headers also simply serve as column headers.

Example: The Main window in Figure 2-12 on page 2-10 contains five sort headers: Patient, Admission, Date, Anesthetist, and Location. The Main window is sorted by Location (i.e., cases are grouped by operating rooms OR10, OR12, and OR14). To sort patients alphabetically instead, click or select the Patient sort header.

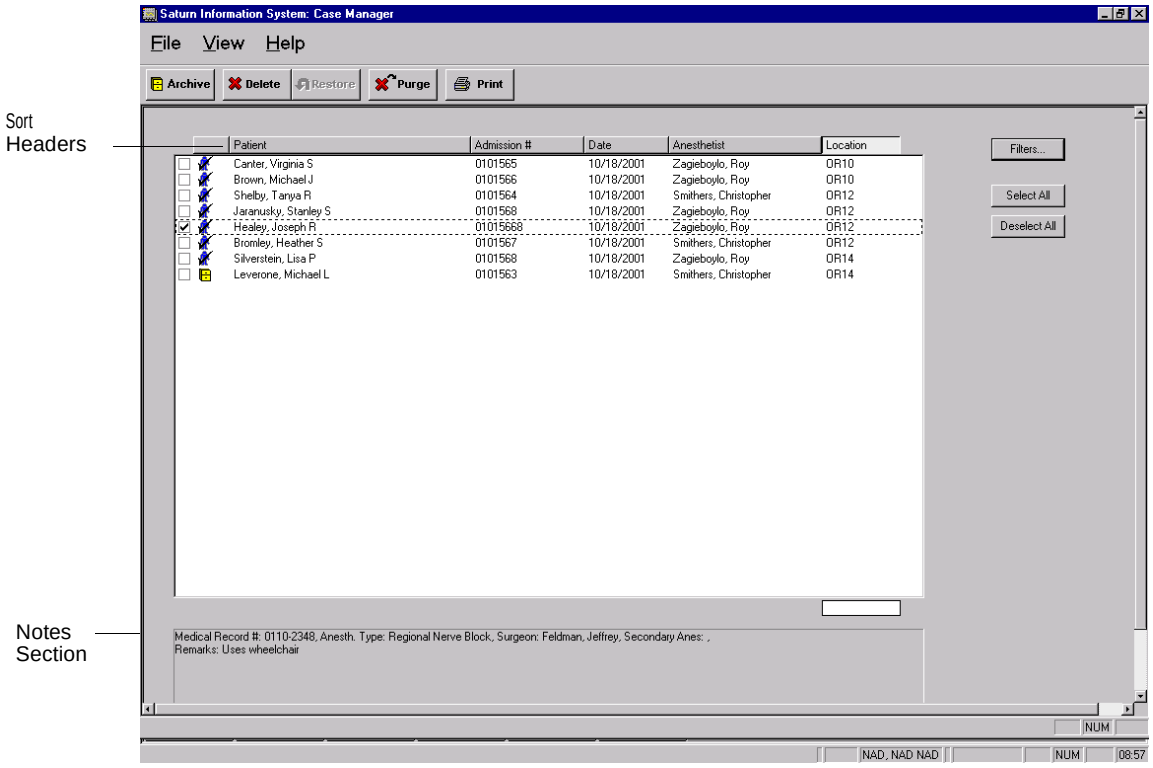

Figure 2-12. Sort Headers

Note: In Figure 2-12, patient data is shown in the notes section about the selected patient (Joseph R. Healey).

Status Bar

The status bar is located at the bottom of the screen (Figure 2-9 on page 2-5) and contains general status information and messages.

Modifying the Main Window Display

You can modify the Main window's appearance by choosing to display or hide the toolbar, and to display or hide the status bar.

Displaying and Hiding the Toolbar

You can display the toolbar by selecting Toolbar from the View menu (Figure 2-13). A check mark appears next to it. Deselecting Toolbar causes the toolbar to be hidden and removes the check mark.

Figure 2-13. View Menu (Toolbar and Status Bar are Selected)

Displaying and Hiding the Status Bar

You can display the status bar by selecting Status Bar from the View menu (Figure 2-13). A check mark appears next to it. Deselecting Status Bar causes the status bar to be hidden and removes the check mark.

Generating a Case List

This section explains how to generate a case list based on filters you select in the Select Filter dialog box. Refer to Table 2-4 on page 2-14 for a complete description of each filter.

Procedure

1. In the Case Manager Main window, select the Filters button (Figure 2-9 on page 5). The Select Filters dialog box appears (Figure 2-14).

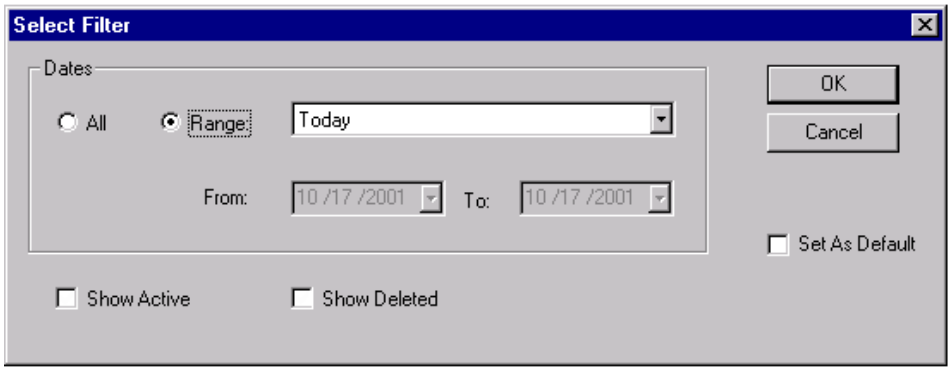

Figure 2-14. Select Filter Dialog Box

2. Select one of the following:
   - Select the All option button to display all patient cases, then go to step 7.
   - Or, select the Range option button to select a date in the Range box.
3. If you selected Range, click the arrow in the Range box. A drop-down list appears (Figure 2-15). Select a range from the list. The dates appear automatically in the From and To boxes. You cannot edit these dates. If you selected a range other than Custom, go to step 7.

   Note: Select Custom if you want to enter a date range not shown in the list, and proceed to the next step.

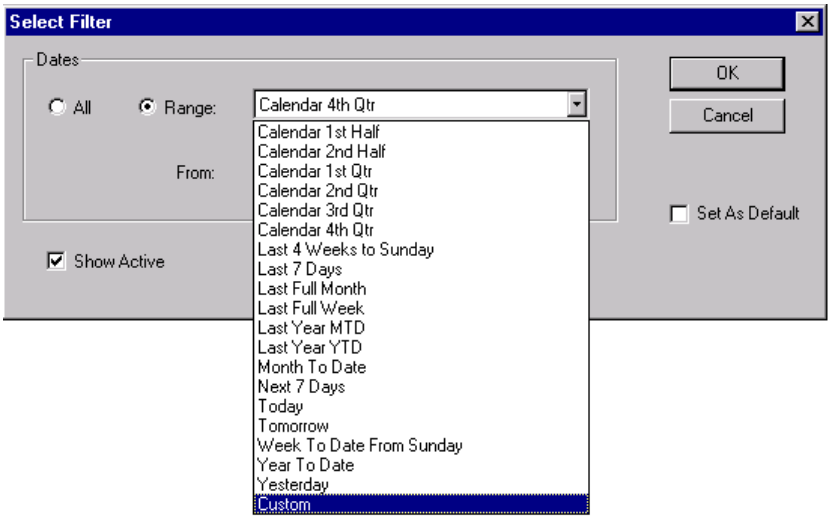

Figure 2-15. Date Range Option List in the Range Box

4. Click the arrow in the From box. A calendar appears (Figure 2-16).

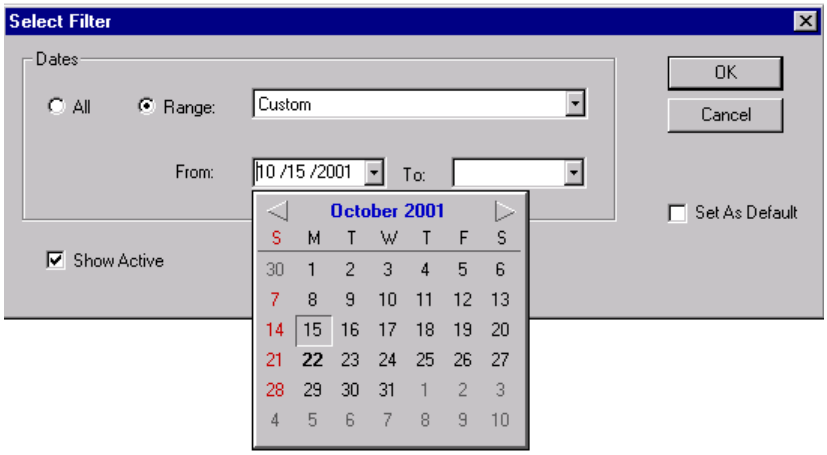

Figure 2-16. Custom Date Range Calendar

5. Do one of the following:
   - Click the arrows on the calendar next to the month (to select an earlier date) and year (to select a future date) until the desired month and year appear. Then click the date on the calendar. The calendar disappears and the date appears in the From box.
   - Or, insert the cursor in the From box and type in the date.
6. Repeat steps 4 and 5 to select a date in the To box.

   Note: An error message appears if the To date is sooner than the From date, or if the dates are invalid. Re-enter valid dates and repeat the steps.

Example: If you entered October 1, 2002 in the From box (i.e., the beginning of the period), and April 15, 2002 in the To box (i.e., the end of the period), you will not be able to generate a patient case list. If you entered 13 in the month slot, you will not be able to generate a list.

7. Select the following check boxes as needed:
   - Select the Show Active check box to show only active cases (i.e., cases that are deleted will not show, unless you select the Show Deleted check box.
   - Select the Show Deleted check box to show deleted cases; otherwise these cases are hidden from view.
   - Select Set as Default if you want the case list generated within the range you just selected. (The range reappears in this dialog box when you select the Filters button later.) Otherwise, when you exit Case Manager or restart the system, the range reverts to the last range set as the default.
8. Press the OK button, or press Cancel to start over.

   If you pressed OK, a patient case list based on the filters you just selected appears in the Case Manager Main window.

Table 2-4. Range Option List in the Select Filter Dialog Box

Range Option	Description
Dates	Allows you to select options from the drop-down list, or to enter a custom date range.
All	Selecting this option button allows you to select from a list of all cases in the current Saturn database.
Range	Selecting this option button allows you to select a date range from the drop-down list. Options include: Calendar 1st Half, Calendar 2nd Half; Calendar 1st (2nd, 3rd, 4th) Qtr; Last 4 Weeks to Sun(day), Last 7 Days, Last Full Month, Last Full Week, Last Year MTD (Month To Date), Last Year YTD (Year To Date), Month To Date, Next 7 Days, Today, Tomorrow, Week To Date From Sun(day), Year To Date, Yesterday, and Custom (see Custom below). To select a date range from the list, click on the list box arrow and highlight an option. The From and To dates cannot be edited.
Custom (Last option in the Range list box)	Selecting this option button allows you to enter a range not shown in the list. Custom must be selected from the drop-down menu, then dates must be entered in the From and To list boxes by pressing the arrows and choosing the dates on the calendar, or by typing the dates using the keyboard. If invalid dates are entered, an error message appears. Re-enter valid dates. *Default:* The last date range selected and saved as the default (see Set As Default below).
Show Active	Displays a list of all cases in all locations, except for deleted cases. *Default:* Checked.
Show Deleted	Displays all deleted cases. *Default:* Checked.
Set As Default	Select this check box to keep the date range you selected in the Range list box (including a Custom range). When you generate a case list, that range will be used until you select a different one. *Default:* Not checked.
OK Button	Select the OK button to keep the selected date range. A case list, based on the filters you selected, appears.
Cancel Button	Select the Cancel button if you don't want to retain the range you just entered. The previous date range is used to generate the list.

Archiving Patient Cases

Case Manager lets you mark a patient case "archived." Archived cases are considered closed and sealed. However, these cases can be reopened and returned to an active status in the Recorder program.

Note: Archived cases can be removed from the Recorder Main window by deleting them. Refer to "Deleting Patient Cases" on page 2-17.

Prerequisite

The cases must not already be marked with an archive icon (yellow file cabinet) to indicate an archived status, nor can these cases be ones that are deleted (marked by a red X).

Procedure

Follow these steps to archive patient cases.

1. In the Main window, select the check boxes next to the patient cases to be archived (Figure 2-17).

   Note: Make sure only cases to be archived are selected. All other check boxes should be empty.

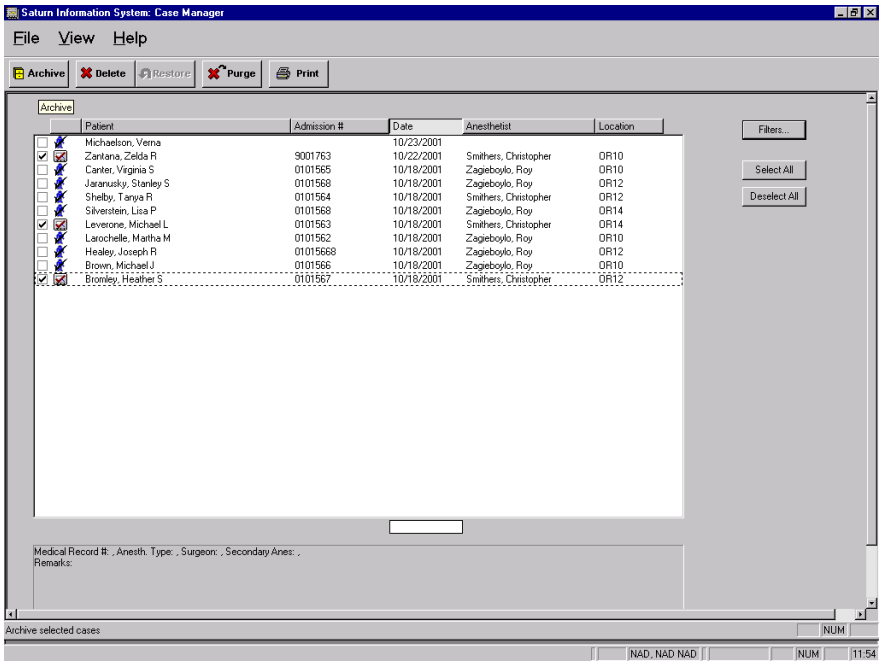

Figure 2-17. Selecting Patient Cases to be Archived

2. Press the Archive button. Or, select the Archive option on the File menu.

   The patient cases are marked with the archive icon, indicating an archived status (Figure 2-18).

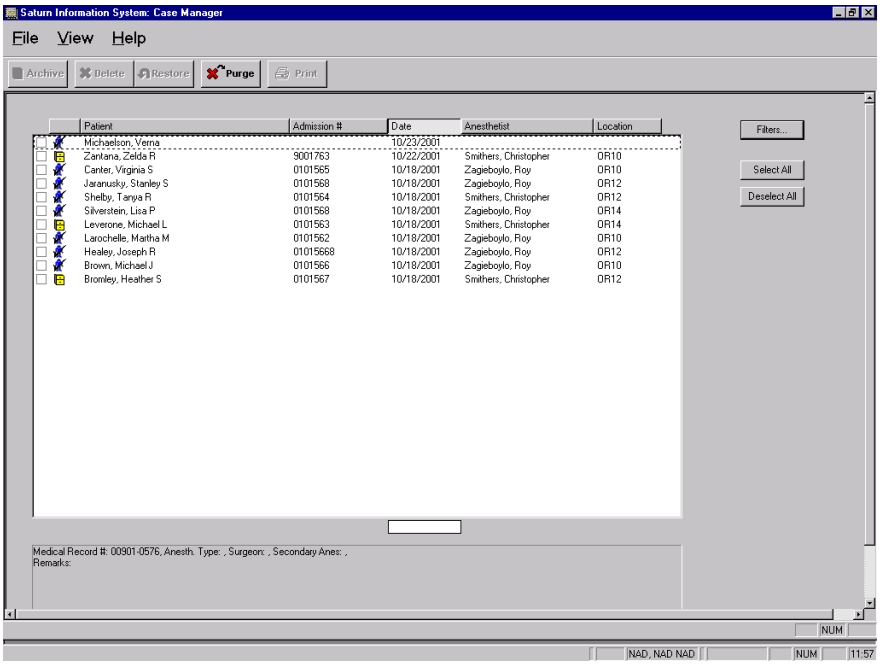

Figure 2-18. Patient Cases Marked “Archived”

Note: An archived case is restored to an active status when the case is opened in Recorder and new data is recorded in the case. If data is added to the case without using the Record button, the case remains archived.

Deleting Patient Cases

Case Manager lets you mark patient cases “deleted” so that the cases do not appear in the Main window of any Saturn Information System application. Active cases and archived cases can be deleted.

Note: Deleted cases are not permanently removed from the database. Rather, these cases are hidden from the Recorder users' view. You can restore cases after you delete them, making them viewable and accessible again for users in the system. See “Restoring Patient Cases” on page 2-19.

Prerequisite

The cases must not already be marked with a red X to indicate their deleted status.

Procedure

Follow these steps to delete patient cases.

1. In the Main window, select the check boxes next to the patient cases to be deleted (Figure 2-19).

   Note: Make sure only cases to be deleted are selected. All other check boxes should be empty.

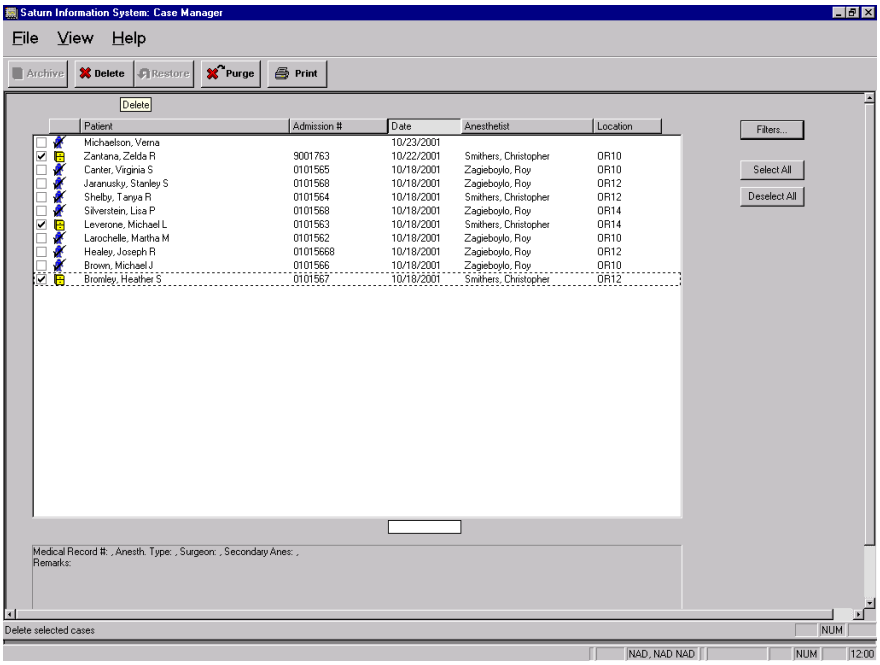

Figure 2-19. Selecting Patient Cases to be Deleted

2. Press the Delete button on the toolbar. Or, select the Delete option on the File menu.

   The patient cases are marked by a red X to indicate a deleted status (Figure 2-20).

   Note: To display deleted patient cases in the Case Manager Main window, you must select the Show Deleted check box in the Select Filter dialog box. Refer to Figure 2-14 on page 2-11.

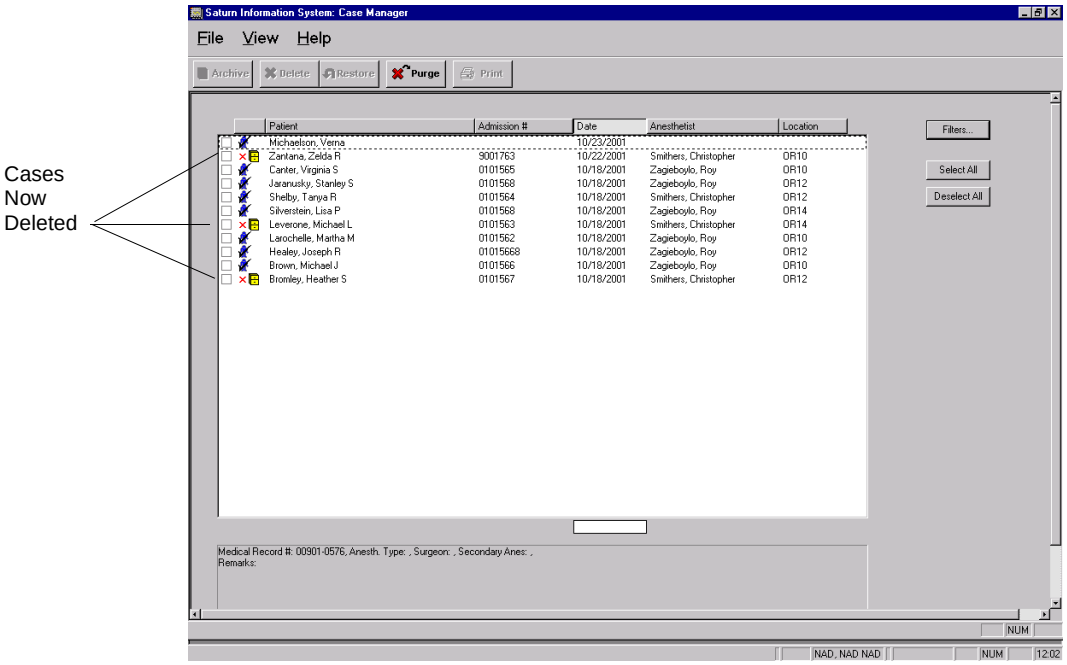

Figure 2-20. Patient Cases Marked "Deleted"

Restoring Patient Cases

Case Manager lets you restore patient cases that have been deleted so that the cases reappear in the Main window of other Saturn Information System applications.

Prerequisite

The cases must be marked with a red X to indicate a deleted status.

Note: If deleted cases do not appear in the case list, press the Filters button and select the Show Deleted check box.

Procedure

Follow these steps to restore patient cases.

1. In the Main window, select the check boxes next to the patient cases that are deleted (indicated by a red X in Figure 2-21), but that you want to restore.

   Note: Make sure only cases to be restored are selected. All other check boxes should be empty.

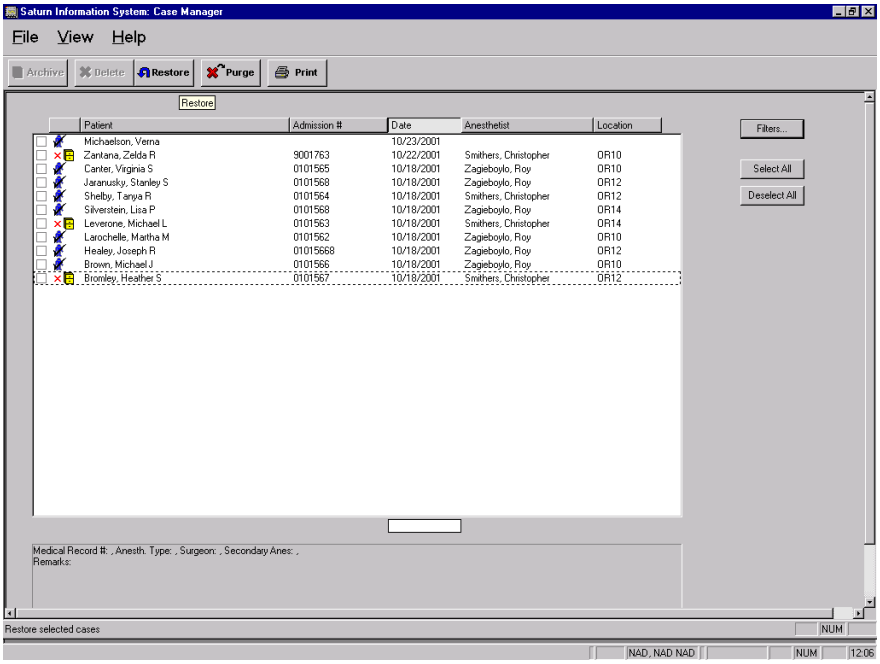

Figure 2-21. Selecting Deleted Patient Cases to be Restored

2. Press the Restore button. Or, select the Restore option on the File menu.

   The two patient cases selected in Figure 2-21 on page 2-19 (that were marked deleted) are restored now to their previous archived status (Figure 2-22). The red X previously next to each one is removed.

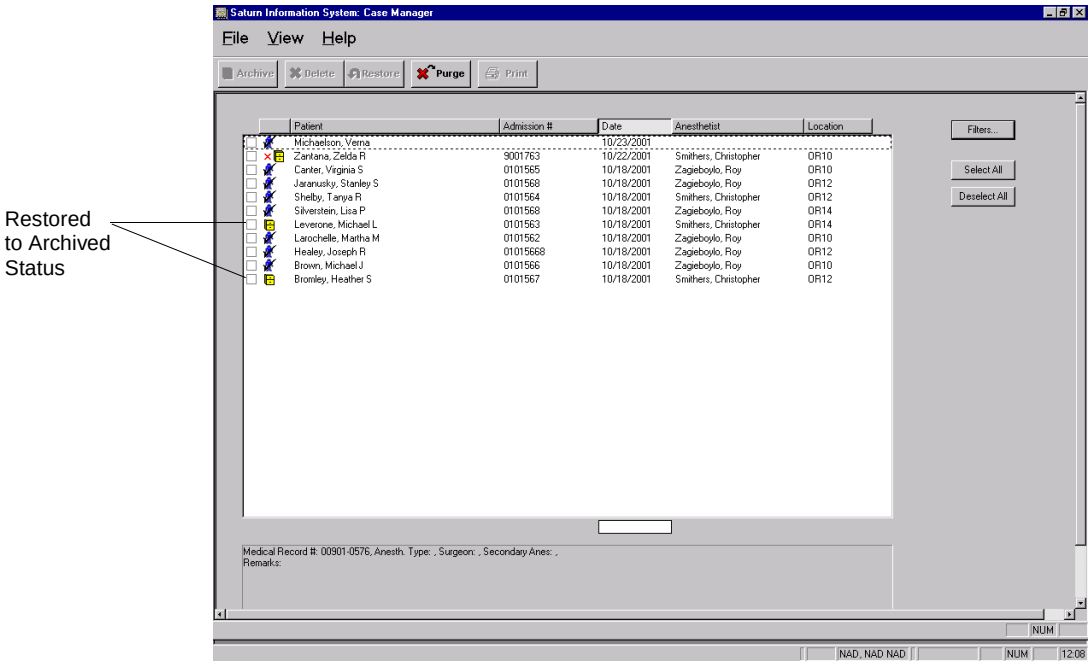
Restored to Archived Status
Saturn Information System: Case Manager
File View Help
Archive Delete Restore Purge Print
Patient Admission # Date Anesthetist Location
Michaelson, Verna 10/23/2001
Zantana, Zelda R 9001763 10/22/2001 Smithers, Christopher OR10
Canter, Virginia S 0101565 10/18/2001 Zagieboylo, Roy OR10
Jaranusky, Stanley S 0101568 10/18/2001 Zagieboylo, Roy OR12
Shelby, Tanya R 0101564 10/18/2001 Smithers, Christopher OR12
Silverstein, Lisa P 0101568 10/18/2001 Zagieboylo, Roy OR14
Leverone, Michael L 0101563 10/18/2001 Smithers, Christopher OR14
Larochelle, Martha M 0101562 10/18/2001 Zagieboylo, Roy OR10
Healey, Joseph R 01015668 10/18/2001 Zagieboylo, Roy OR12
Brown, Michael J 0101566 10/18/2001 Zagieboylo, Roy OR10
Bromley, Heather S 0101567 10/18/2001 Smithers, Christopher OR12
Filters...
Select All
Deselect All
Medical Record #: 00901-0576, Anesth. Type: , Surgeon: , Secondary Anes: ,
Remarks:
NUM
NAD, NAD NAD
NUM
12:08

Figure 2-22. Restored Patient Cases

Purging Patient Cases

Case Manager lets you permanently delete cases from the database. These cases must first be deleted (see "Deleting Patient Cases" on page 2-17).

Important: After you purge a case, it is not retrievable.

Prerequisite

The case must already be marked with a red X to indicate its deleted status.

Note: If deleted cases do not appear in the case list, press the Filters button and select the Show Deleted check box.

Procedure

Follow these steps to permanently remove patient cases from the database.

1. In the Main window, review the deleted patient cases to be purged (i.e., those marked by a red X, as shown in Figure 2-23).

   Important: All deleted cases (i.e., those marked with a red X) will be purged when you select the Purge button. (Check boxes do not need to be selected!) Restore any deleted cases now that you do not wish to remove permanently from the database (see "Restoring Patient Cases" on page 2-19).

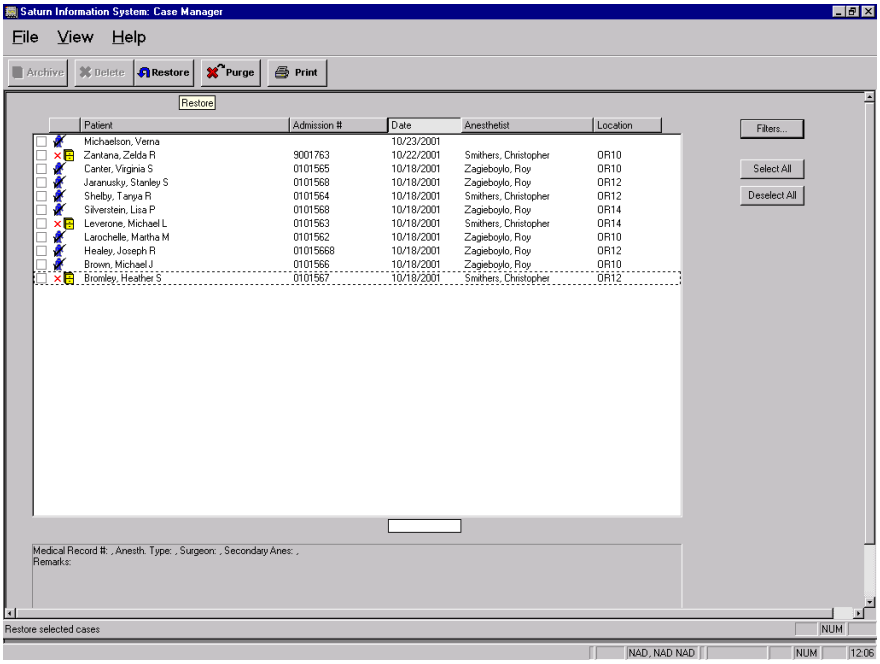
Saturn Information System: Case Manager
File View Help
Archive Delete Restore Purge Print
Restore
Patient Admission # Date Anesthetist Location
Michaelson, Verna 10/23/2001
Zantana, Zelda R 9001763 10/22/2001 Smithers, Christopher OR10
Canter, Virginia S 0101565 10/18/2001 Zagiebolo, Roy OR10
Jaranusky, Stanley S 0101568 10/18/2001 Zagiebolo, Roy OR12
Shelby, Tanya R 0101564 10/18/2001 Smithers, Christopher OR12
Silverstein, Lisa P 0101568 10/18/2001 Zagiebolo, Roy OR14
Leverone, Michael L 0101563 10/18/2001 Smithers, Christopher OR14
Larochelle, Martha M 0101562 10/18/2001 Zagiebolo, Roy OR10
Healey, Joseph R 01015668 10/18/2001 Zagiebolo, Roy OR12
Brown, Michael J 0101566 10/18/2001 Zagiebolo, Roy OR10
Bromley, Heather S 0101567 10/18/2001 Smithers, Christopher OR12
Filters...
Select All
Deselect All
Medical Record #: , Anesth. Type: , Surgeon: , Secondary Anes: ,
Remarks:
Restore selected cases
NUM
NAD, NAD NAD
NUM
12:06

Figure 2-23. Selecting Patient Cases to be Purged

2. Press the Purge button on the toolbar. Or, select the Purge option on the File menu. The following message appears (Figure 2-24 on page 2-22):

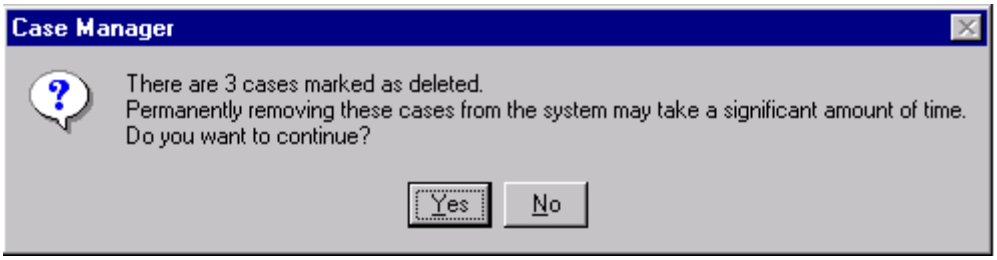
Case Manager
There are 3 cases marked as deleted.
Permanently removing these cases from the system may take a significant amount of time.
Do you want to continue?
Yes
No

Figure 2-24. Purge Continue Option

3. Select Yes to permanently erase the deleted cases from the database, then go to the next step.

   Or, select No to cancel the Purge command.

4. If you selected Yes, all patient cases with a deleted status (i.e., a red X) are removed from the Saturn database and from the case list. A progress indicator appears while the cases are being purged from the database.

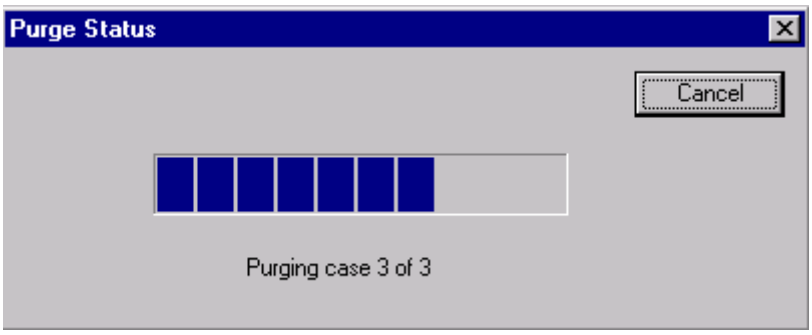

Figure 2-25. Purge Progress Indicator

5. If you want to cancel purging cases, press the Cancel button in the progress indicator. The case being purged is completely erased.

   Another message appears. Select Yes to stop purging the remaining cases, or select No to continue purging cases.

Previewing Before Printing

Use the Print Preview function when you want to view a case summary before you print it.

Procedure

1. In the Main window, select the check boxes of the case(s) you want to preview. You can select up to 10 cases.

   Note: If more than 10 cases are selected, the first 10 in the list will be generated for previewing.

2. Perform one of the following according to your input device:

Mouse	Click the File menu and then click Print Preview.
Keyboard	Type ALT, F, V to select Print Preview from the File menu.

   An example preview of a Case Summary report can be seen in Figure 2-26.

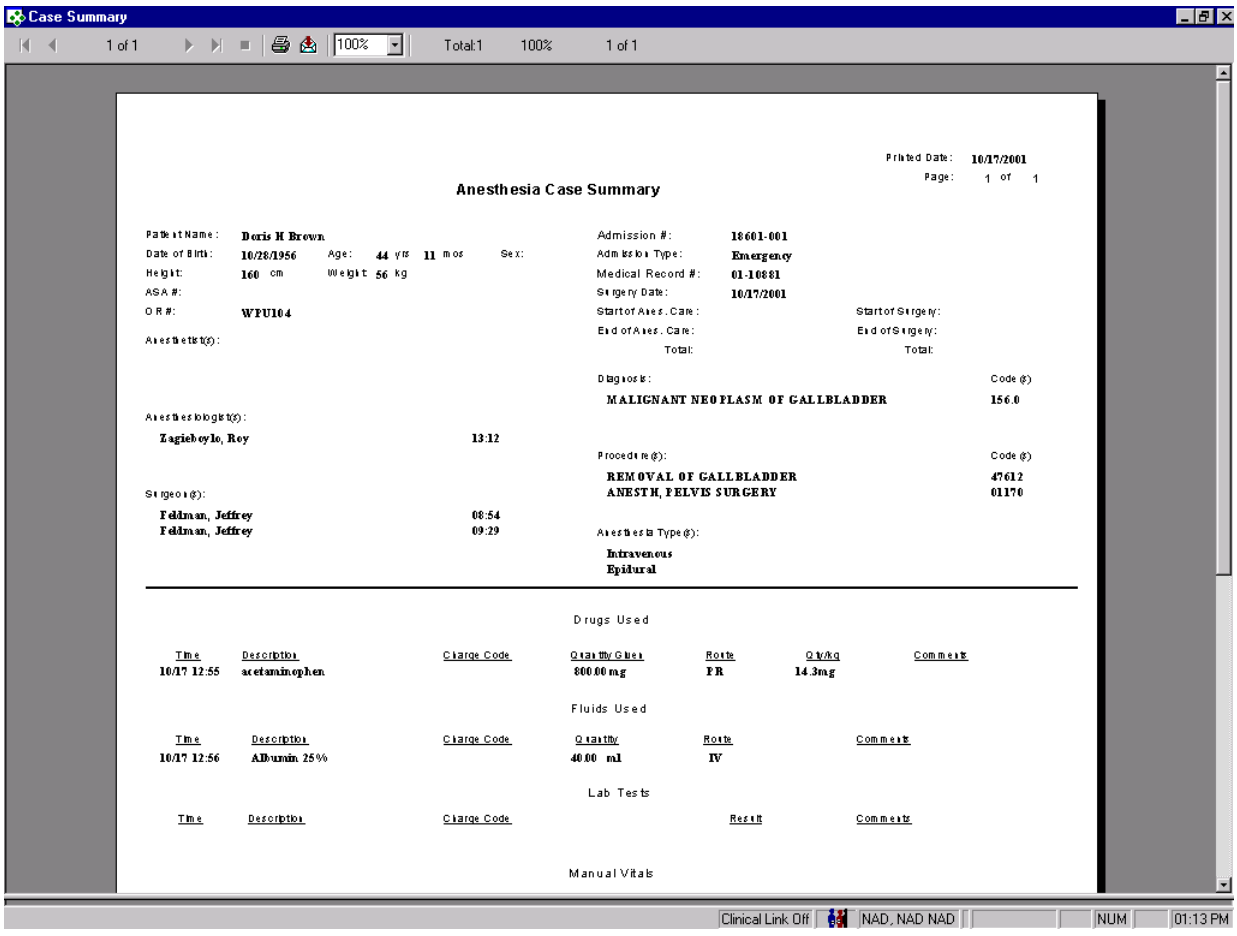

Figure 2-26. Print Preview of a Case Summary

Note: The Anesthesia Case Summary Report has been modified to show the electronic signature and time of signature for events.

3. Preview the report by using any of the following Case Summary toolbar features and buttons (Figure 2-27 on page 2-24):

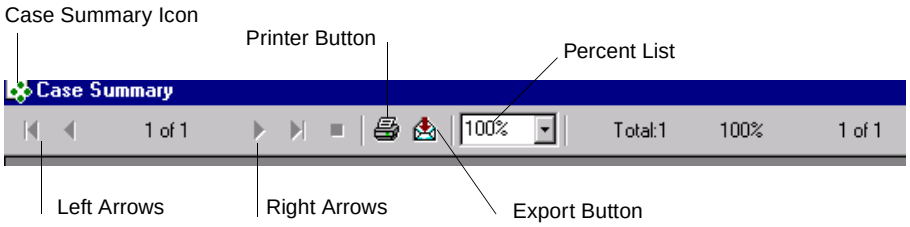

Figure 2-27. Print Preview Toolbar

Left Arrows	Displays a view of the beginning of the current report (arrow with a line), or displays the previous page.
Right Arrows	Displays a view of the end of the current report (arrow with a line), or displays the next page.
Case Summary Icon	When clicked, minimizes or closes the currently displayed report. If others were selected at the same time for previewing (up to 10), the next report appears. To restore a minimized report, see step 5.
Printer Button	Displays the Print dialog box. Refer to "Printing a Case Summary" on page 2-27.
Export Button	Displays the Export dialog box. See "Exporting a Case Summary Report to a File" on page 2-25.
Percent List	Lets you determine how large or small you want the report displayed, including showing the entire page width or page length in the window.

4. Close the preview window by doing one of the following:
   - Select the Case Summary icon in the upper left corner of the title bar, and then select Minimize or Close from the drop-down menu.
   - Or, right-click the icon in the status bar, and then select Minimize or Close from the context menu.
5. To restore a minimized report, right-click the Case Summary icon in the status bar, and then select Restore from the context menu.

Exporting a Case Summary Report to a File

You can export a case summary to a system file, such as an Excel™ spreadsheet, an HTML file, or a Lotus 1-2-3™ work sheet.

Prerequisite

A Print Preview of the case summary must be displayed on the screen. Refer to "Previewing Before Printing" on page 2-23.

Procedure

Perform the following to export a case summary to a system file.

1. With a print preview of the case summary displayed on the screen (Figure 2-26 on page 2-23), press the Export button on the Print Preview tool-bar (Figure 2-27 on page 2-24). The Export dialog box appears (Figure 2-28).

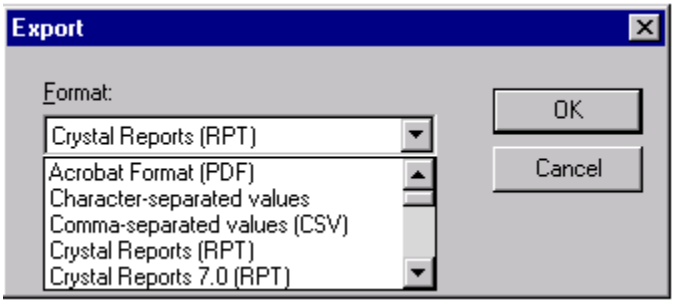

Figure 2-28. Export Dialog Box (Format List Shown)

Note: When you export a report to a file format other than a Seagate Crystal Reports format, you may lose some or all of the formatting that appears in your report. The program attempts to preserve as much formatting as the export format allows.

2. Select a report from the Format list.
3. Select a location in the Destination list (not shown in Figure 2-28).
4. Press OK. Another dialog box may appear, depending on the file type you selected. Make your choices and then press the OK button. The Choose Export File dialog box appears (Figure 2-29 on page 2-26).

Note: The Choose Export File dialog box does not appear when exporting to an XML or an HTML file.

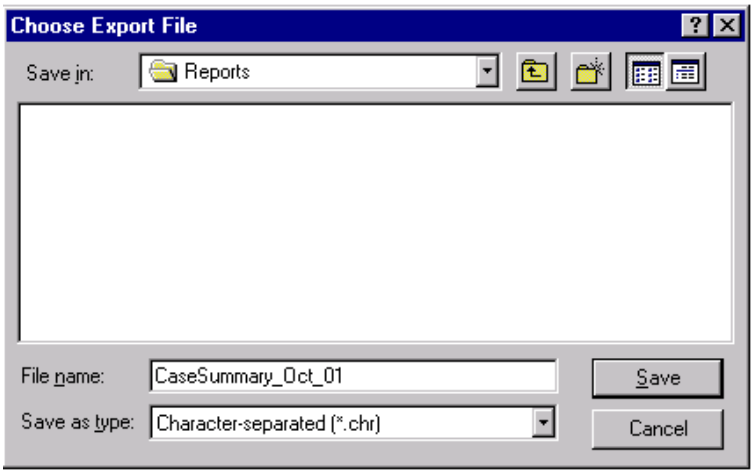

Figure 2-29. Choose Export File Dialog Box

5. Select a location in the Save in box, type a file name in the File name box, and then press the Save button.

Printing a Case Summary

You can print one or more case summaries from inside the Print Preview screen, or by selecting Print on the File menu in Case Manager. Both procedures follow.

Prerequisite

A print preview of the case summaries you want to print must be displayed on the screen. Refer to "Previewing Before Printing" on page 2-23.

Printing from the Print Preview Screen

Perform the following to print one or more case summaries within the Print Preview screen.

1. Using the mouse, click the Printer button (Figure 2-27 on page 2-24) on the Print Preview toolbar.

   The Print dialog box appears (Figure 2-30).

Figure 2-30. Print Dialog Box (Using the Print Button)

2. Select the All or Pages option button in the Print Range area. If you selected Pages, enter the page range in the From and To boxes, and the number of copies in the Copies box.
3. Press OK. The report is printed.

Printing from the File Menu or Main Window Toolbar

Case Manager lets you print a case summary directly from the File menu or toolbar in the Case Manager Main window.

1. Select the check box(es) of the case(s) to be printed in the Main window (Figure 2-9 on page 2-5).
2. On the toolbar, press the Print button.

   –Or–

   On the File menu, choose Print.

   –Or–

   On the keyboard, type ALT, F, P or CTRL+P.

   The Print dialog box appears (Figure 2-31). If you press OK, the entire case summary is sent to the default printer displayed in the Name box.

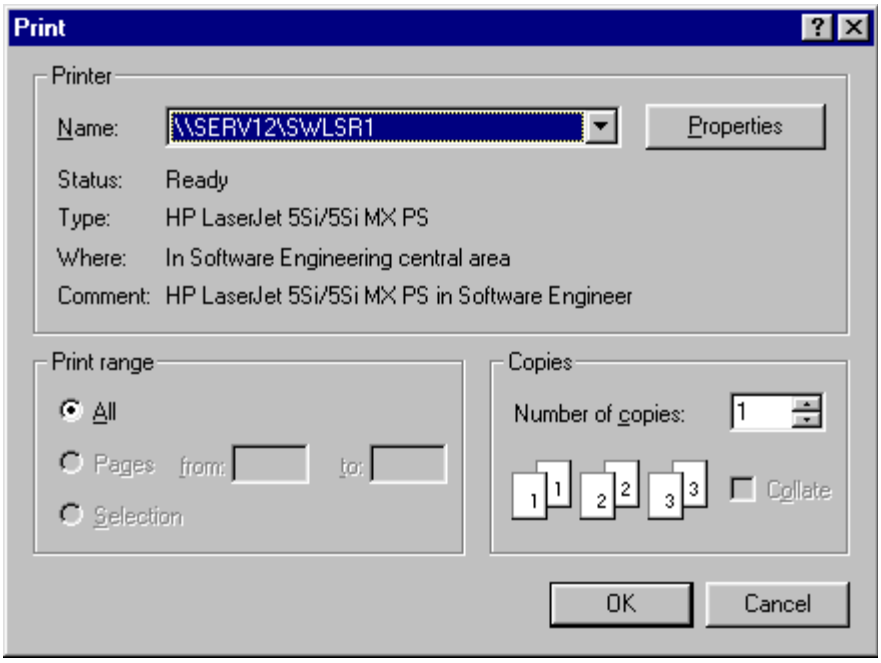

Figure 2-31. Print Dialog Box (Using File Menu or Toolbar)

Exiting Case Manager

When you are finished archiving, deleting, purging and restoring patient cases, your changes are saved automatically. You can exit Case Manager.

Procedure

To exit Case Manager, follow the procedure for the input device you are using:

Mouse	Click the Control menu icon on the title bar (Figure 2-32), and then select Close. –Or– Click Exit from the File menu.
Keyboard	Type ALT, F, X to select Exit from the File menu.

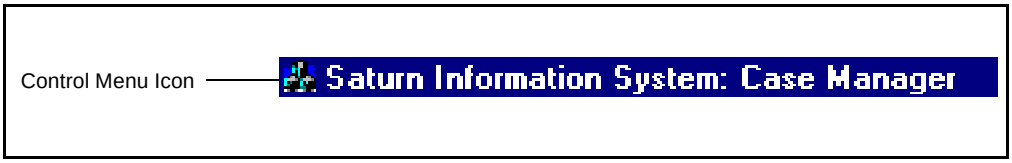

Figure 2-32. Control Menu Icon

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